LOS ANGELES UNION STATION
FORECOURT AND ESPLANADE IMPROVEMENTS PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

STATE CLEARINGHOUSE NUMBER 2016121064

PREPARED FOR:

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Metro

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ES.1 Introduction

This Draft Environmental Impact Report (DEIR) analyzes the potential for significant environmental impacts associated with the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). This EIR has been prepared in accordance with California Environmental Quality Act Guidelines (State CEQA Guidelines) (14 California Code of Regulations [CCR] Section 15000 et seq.). Pursuant to Public Resources Code (PRC) Section 21067 and 14 California Code of Regulations (CCR) Sections 15367 and 15050–15053, the Los Angeles County Metropolitan Transportation Authority (Metro) is identified as the Lead Agency. The Lead Agency is "the public agency with the greatest responsibility for supervising or approving the project as a whole." Metro, as the Lead Agency, has the authority to approve the project and implement appropriate mitigation measures to reduce significant impacts. Metro owns Los Angeles Union Station (LAUS).

ES.2 Project Location and Setting

The project site is located in the City of Los Angeles, in the northern portion of the downtown area. The proposed project is located adjacent to and within LAUS, at 800 North Alameda Street, City of Los Angeles, California 90012, in the U.S. Geological Survey Los Angeles 7.5-minute topographic quadrangle. The LAUS property is generally bounded by Highway 101 to the south, Alameda Street to the west, Cesar E. Chavez Avenue to the north, and Vignes Street to the east. However, the project site is generally bounded by Spring Street to the west, Cesar E. Chavez Avenue to the north, LAUS to the east, and Arcadia Street to the south. Specific project elements are located on Alameda Street from Arcadia Street in the south to Cesar E. Chavez Avenue in the north, Arcadia Street from Alameda Street to Spring Street, Los Angeles Street from El Pueblo de Los Angeles to LAUS, and the Union Station Forecourt area. Adjacent to the project to the west are the Chinese American Museum at 425 North Los Angeles Street, El Pueblo de Los Angeles State Historic Park at 125 Paseo De La Plaza, and the Avila Adobe Museum at 10 Olvera Street.

ES.3 Project Description

The proposed project includes improvements on Alameda Street, Arcadia Street, Los Angeles Street, and the Los Angeles Union Station Forecourt. The proposed project will focus on perimeter improvements to improve pedestrian safety, accessibility and connectivity. The proposed improvements to LAUS include removing the short-term parking northwest of the entrance to LAUS (approximately 60 spaces) to create a new civic plaza with an outdoor seating area; creating a new esplanade along Alameda Street (between Cesar E. Chavez Avenue and Arcadia) by narrowing the roadway and reallocating roadway area for the expanded pedestrian and bicyclist multi-use esplanade on the eastside and widened sidewalks on the west; reconfiguring the entrance from LAUS to the El Pueblo de Los Angeles State Historic Park by creating a consolidated crosswalk that would provide additional pedestrian and bicycle connectivity through the partial closure of Los Angeles Street and closure of the northern LAUS driveway

on Alameda Street; and repurposing the northernmost travel lane on Arcadia Street (adjacent to El Pueblo) between Alameda Street and Spring Street into a tour bus parking area designated for El Pueblo.

In addition to the above-mentioned improvements, the proposed Alameda Esplanade would change three travel lanes in each direction and a left turn center lane to two lanes of travel with a left turn lane/center median and curb-side drop-off on the east side of Alameda Street; and expand sidewalks on both sides of the street into the roadway and create a shared tree-lined multi-use path for both bicyclists and pedestrians on the east side of Alameda Street.

ES.4 Project Objectives / Purpose and Need

The Los Angeles County Metropolitan Transportation Authority (Metro) anticipates increased visitors and transit riders utilizing LAUS as the population grows and there is a desire to utilize alternate forms of transit than automobiles. The project also supports local, regional, and state policies with regard to encouraging multi-modal travel. The need for the project is driven by safety and the need to better serve destination and through traffic at LAUS. The goal of the proposed project is to enhance connectivity to LAUS by creating a safer, more welcoming experience to transit riders and visitors.

Metro has identified seven guiding objectives to achieve the project goal:

- Protect and enhance LAUS as a national historic resource by advancing clear sight lines and view sheds to the station.[1]
- Prioritize connectivity, convenience, and safety for the most vulnerable users (pedestrians, bicyclists, transit patrons and community stakeholders) to safely navigate to and from the project site.[2][3]
- Advance desirable and accessible public space at the LAUS forecourt that creates a visually porous and permeable connection between Union Station and the surrounding historic and cultural communities.[4]

[1] National Park Service. 1980. *National Register of Historic Places Inventory Nomination Form.* Available at: https://npgallery.nps.gov/GetAsset?assetID=c72efa93-90ca-40ba-9ca6-ae3d3515cf37

[2] City of Los Angeles Department of City Planning. 2016*. Mobility Plan 2035*. Available at: http://planning.lacity.org/documents/policy/mobilityplnmemo.pdf. Accessed August 2, 2017.

[3] Los Angeles County Metropolitan Transportation Authority. 2015. *Connect US Action Plan*. Available at: https://media.metro.net/projects_studies/union_station/images/LAUSMP_Action_Plan_Final_100515.pdf. Accessed August 2, 2017.

[4] County of Los Angeles Department of Public Health. November 2014. *The Plan for a Healthy Los Angeles*. Available at: http://publichealth.lacounty.gov/place/docs/FINAL_CTG%20HIGHLIGHTS%20Plan%20for%20Healthy%20LA_Nov%202014.pdf. Accessed August 2, 2017.

- Facilitate alternatives to driving by providing infrastructure that enables more walking and bicycling consistent with the objectives of Metro's *Climate Action and Adaptation Plan*.[5]
- Enhance the safety and quality of pedestrian and bicycle connections between the station and El Pueblo Historic Monument, Father Serra Park, Olvera Street, and nearby business and neighborhoods consistent with identified strategies in the *Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*.[6]
- Advance sustainability by providing for reduced consumptive water use in a cost-effective manner consistent with the provisions of Metro's *Water Action Plan*[7] and improving multi-modal facilities that encourage active transportation and reduction in vehicle miles traveled.[8]
- Advance comprehensive planning for LAUS that leverages it as the major regional transportation hub, a destination, and one of the city's foremost landmarks.[9]

ES.5 Alternatives

CEQA requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. In accordance with CEQA Guidelines Section 15126.6, the EIR analyzes Alternative 1: No Project Alternative, Alternative 2: Full Closure of Los Angeles Street, and Alternative 3: Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure). Metro received comments regarding an additional alternative of constructing a bridge over Alameda Street that was not carried forward for detailed analysis, as it was not capable of meeting most of the basic objectives of the project.

[5] Los Angeles County Metropolitan Transportation Authority. June 2012. *Climate Action and Adaptation Plan*. Available at: http://media.metro.net/projects_studies/sustainability/images/Climate_Action_Plan.pdf. Prepared by ICF International.

[6] Southern California Association of Governments. April 2016. *Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.* Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf

[7] Los Angeles County Metropolitan Transportation Authority. June 2010. *Water Action Plan*. Available at: http://media.metro.net/projects_studies/sustainability/images/Water_Plan2010_0825.pdf. Prepared by ICF International and Brezak & Associates Planning.

[8] Southern California Association of Governments. April 2016. *Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.* Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf

[9] City of Los Angeles Department of City Planning. 2016. *Mobility Plan 2035*. Available at: http://planning.lacity.org/documents/policy/mobilityplnmemo.pdf. Policy 3.6, p. 88. Accessed August 2, 2017.

ES.5.1 No Project Alternative

The “no project” alternative analysis discusses the existing conditions at the time of publication of the Notice of Preparation on December 22, 2016, projected forward to the 2029 planning horizon if the project were not approved, based on current plans and consistent with available infrastructure and community services.

For this project, the “no project” alternative will leave the current conditions in place: Alameda Street with three traffic lanes in each direction; the current entrance and exit driveways from LAUS with passenger drop-off at the curb in front of the building; two crosswalks across Alameda Street that connect LAUS to El Pueblo on both sides of Los Angeles Street; no changes to Los Angeles Street; no changes to the short term parking lot; and no bus parking along Arcadia Street.

ES.5.2 Alternative 2: Full Closure of Los Angeles Street

The Full Closure of Los Angeles Street alternative would include many of the elements described in the project description with the exception of the partial closure of Los Angeles Street. Instead of the partial closure as described, this alternative would include a complete closure from Alameda Street to the existing mid-block crosswalk across Los Angeles Street. Northbound access on Los Angeles Street would be retained from Arcadia Street to the US 101 Northbound On-Ramp. With the complete closure there would be a continuous pedestrian connection between Father Serra Park and El Pueblo, and a continuous sidewalk would be provided adjacent to Alameda Street. The full closure also provides the potential for a wider crossing area for pedestrians and bicyclists. The Forecourt changes would remain as proposed in the project description. This alternative would change traffic patterns because a connection between Los Angeles Street and Alameda Street would be removed. On Arcadia Street, the tour bus parking lane would be provided during off-peak hours only, with the lane being used by through-traffic during peak hours.

ES.5.3 Alternative 3: Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure)

The Restricted Left Hand Turns from Los Angeles Street alternative would include many of the elements described in the project description but would not allow left hand turns onto Alameda Street from Los Angeles Street. This would mean that only right-hand turns (southbound) would be allowed onto Alameda Street. Vehicles could also travel through into the LAUS driveway from Los Angeles Street. This alternative would change the traffic and pedestrian circulation on and crossing Alameda Street. This alternative would also keep the Forecourt improvements as described in the project description. This alternative would change traffic patterns because the eastbound left movement from northbound Los Angeles Street to northbound Alameda Street would be prohibited. On Arcadia Street, the tour bus parking lane would be provided during off-peak hours only, with the lane being used by through-traffic during peak hours.

ES.6 Areas of Controversy

Areas of controversy associated with the proposed project include areas where a significant and unavoidable impact has been identified and areas of public concern. Public comments submitted during the scoping period focused on the following topics:

- Pedestrian circulation
- Bicycle infrastructure, circulation, and parking
- Bicycle path on Los Angeles Street
- Closure of the southern crosswalk on Alameda
- Proposed uses of the forecourt
- Landscaping and tree removals/additions
- Protection of eligibility of LAUS for Listing in the National Register of Historic Places
- Avoidance and minimization of impacts to tribal cultural resources
- Avoidance and minimization of impacts on historic and archeological resources
- Monitoring of excavations by qualified archeologists and Native American representatives
- Minimization of impacts on utilities under Alameda and First Street and adjacent sidewalks
- Traffic congestion; traffic associated with the Express Lanes on ramp
- Effect of parking lot removal on LAUS drop off/pick up
- Inclusion of Father Serra Park

The public comment letters received on the project are included in Appendix A, *Notice of Preparation and Notice of Preparation Comments*.

ES.7 Summary of Impacts and Mitigation Measures

The EIR analysis demonstrates that implementation of the proposed project would not result in significant impacts to 14 of the 18 environmental issue areas recommended for consideration in Appendix G of the State CEQA Guidelines (Table ES.7-1, *Summary of Impacts and Mitigation Measures*):

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality
- Greenhouse Gas Emissions
- Energy
- Geology and Soils
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing

- Public Services
- Recreation
- Utilities and Service Systems

The proposed project would have the potential to result in significant impacts to four environmental issue areas recommended for consideration in Appendix G of the State CEQA Guidelines (Table ES.7-1):

- Biological Resources
- Cultural Resources
- Hazards and Hazardous Materials
- Transportation and Traffic

Impacts to biological resources, cultural resources, and hazards and hazardous materials would be reduced to below the level of significance with the implementation of mitigation measures. Impacts to transportation and traffic would remain significant and unavoidable after mitigation (Table ES.7-1) .

TABLE ES.7-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Proposed Project Impacts	Mitigation Measures	Level of Significance after Mitigation
Aesthetics		
The proposed project would result in less than significant impacts in regard to having a substantial adverse effect on a scenic vista.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in no impacts in regard to substantially damaging scenic resources within a state scenic highway.	No mitigation measures are required.	No Impact
The proposed project would result in less than significant impacts in regard to substantially degrading the existing visual character or quality of the site and its surroundings.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts in regard to creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	No mitigation measures are required.	No Impact
Agriculture and Forestry Resources		
The proposed project would result in no impacts to agriculture and forestry resources in relation to the conversion of Farmland.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to agriculture and forestry resources in relation to a conflict with existing zoning for agricultural use, or a Williamson Act contract.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to agriculture and forestry resources in relation to conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland rezoned Timberland Production.	No mitigation measures are required.	No Impact
The proposed project would result in no impact to forest lands related to the loss of forest land or conversion of forest land to non-forest uses.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to agriculture and forestry resources in relation to changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.	No mitigation measures are required.	No Impact
Air Quality		
The proposed project would result in less than significant impacts to air quality in regard to conflicting with or obstructing implementation of the applicable air quality plan.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in less than significant impacts to air quality related to the potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction, operation, and maintenance.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in a less than significant impact to air quality related to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in a less than significant impact to air quality in regard to exposing sensitive receptors to substantial pollutant concentrations.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in less than significant impacts to air quality in regard to exposing a substantial number of people to objectionable odors.	No mitigation measures are required.	Less than Significant Impact
Greenhouse Gas Emissions		
The proposed project would result in less than significant impacts to GHG emissions in regard to generating GHG emissions, either directly or indirectly, that may have a significant effect on the environment.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in no impact to GHG emissions in regard to conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.	No mitigation measures are required.	No Impact
Biological Resources		
The proposed project would not result in impacts to biological resources in relation to species listed as rare, threatened, or endangered pursuant to the federal and state ESAs. The proposed project would not result in impacts to biological resources in relation to species recognized by the USFWS, CDFW, or in local regional plans, policies, or regulations as sensitive or special status.	No mitigation measures are required.	No Impact

TABLE ES.7-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Proposed Project Impacts	Mitigation Measures	Level of Significance after Mitigation
The proposed project would not result in impacts to biological resources in relation to riparian habitat or other sensitive natural communities.	No mitigation measures are required.	No Impact
The proposed project would not result in impacts to biological resources in relation to federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means.	No mitigation measures are required.	No Impact
The proposed project would not result in impacts to biological resources in relation to movement of any migratory fish or wildlife species or with an established wildlife corridor. The proposed project would have the potential to result in impacts to biological resources in relation to impeding the use of native wildlife nursery sites.	MM-BIO-1: Whenever feasible, construction shall take place outside of the nesting bird season, which occurs between February 1 and August 31. If construction, ground disturbance, and/or vegetation trimming/removal activities are scheduled to occur during the breeding season, a qualified biologist shall conduct pre-construction breeding bird surveys within thirty (30) days prior to the start of construction, ground disturbance, or vegetation trimming/removal activities to identify the presence of breeding birds protected by the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and the California and federal Endangered Species Acts. If nesting birds are encountered during preconstruction nesting surveys, a 300-foot disturbance-free buffer, pursuant to the MBTA, shall be established around each nest, and no activities shall be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. If for any reason a bird nest must be removed during the nesting season, the applicant shall obtain written documentation from the United States Fish and Wildlife Service and the California Department of Fish and Wildlife authorizing the nest relocation.	Less than Significant Impact
The proposed project would not conflict with any local policies or ordinances protecting biological resources.	No mitigation measures are required.	No Impact
The proposed project would not result in impacts to biological resources in regard to conflicting with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State Habitat Conservation Plan.	No mitigation measures are required.	No Impact
Cultural Resources		
As designed, the elements of the proposed project comply with the Secretary of the Interior's Standards, and would not result in a substantial adverse change to this component of the historical resource pursuant to Section 15064.5(b) of the State CEQA Guidelines. The proposed project would have the potential to result in a significant impact to historical resources as defined in Section 15064.5(b) of the State CEQA Guidelines.	MM-CULTURAL-1: *Archaeological and Historical Resources – Avoidance and Monitoring*. Completion of a Worker Education and Awareness Program (WEAP) for all personnel who will be engaged in ground-disturbing activities shall be required prior to the start of ground-disturbing activities. This shall include training that provides an overview of cultural resources that might potentially be found and the appropriate procedures to follow if cultural resources are identified. This requirement extends to any new staff prior to engaging in ground disturbing activities. An environmental sensitive area shall be established through the use of construction fencing to minimize the potential for built environment resources to be damaged during construction activities. Metro shall require monitoring by a qualified archaeologist of all ground-disturbing activities within 100 feet of known extant unique archaeological resources, significant historical resources, or tribal cultural resources. In addition, consultation shall be undertaken with the Native American tribal representatives designated by the NAHC to determine whether a Native American monitor shall also be present during all or a portion of the ground-disturbing activities. In the event that previously unknown unique archaeological resources, significant historical resources, or tribal cultural resources are encountered during construction, the resources shall either be left in situ and avoided; or the resources shall be salvaged, recorded, and reposited consistent with the provisions of a Phase III data recovery program consistent with the provisions of a Cultural Resources Management Plan. Data recovery is not required by law or regulation. It is, however, the most commonly agreed-upon measure to mitigate adverse effects to archaeological sites eligible or listed under Section 106 Criterion D, as it preserves important information that would otherwise be lost.	Less than Significant Impact

TABLE ES.7-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Proposed Project Impacts	Mitigation Measures	Level of Significance after Mitigation
	MM-CULTURAL-2: *CRMP and Pre-Construction Testing.* Prior to construction, a Cultural Resource Management Plan (CRMP) will be prepared that will target areas within the archaeological APE most likely to contain buried cultural resources. Subsurface test excavation will be conducted to ensure that the Project will identify and evaluate significant archaeological resources. A research design and work plan will be focused on the physical identification of intact subsurface archaeological remains. Prior to construction, Phase II archaeological testing will be conducted in areas most likely to contain buried cultural resources in soils that have been predominantly *in situ* during the past 50 years within the boundaries of recorded unique archaeological resources, significant historical resources as defined in Section 15064.5(a) of the State CEQA Guidelines, or tribal cultural resources as defined in AB 52. If resources are discovered during Phase II testing prior to construction, they will be evaluated for significance with criteria set forth in the CRMP. If significant archaeological deposits are found during test excavations prior to construction, a mitigation plan will be developed to ensure that important archaeological data are not lost. The mitigation plan will include methods by which prehistoric, protohistoric, and historical archaeological deposits will be avoided or recovered prior to construction. If the testing determines no unique archaeological resources or significant historical resources, including potential tribal cultural resources, then the work shall proceed consistent with the provisions of MM-CULTURAL-1. Where the project site has been subject to testing within two years of the proposed activity and no unique archaeological resources, significant cultural resources, or tribal cultural resources are known from the project site, work shall proceed per the provision of Mitigation Measure CULTURAL-1. a. If the testing determines potential unique archaeological resources or significant historical resources, including potential tribal cultural resources, at a depth that will be affected by the ground-disturbing activities, one of two courses of action shall be employed: 1. Where avoidance is feasible, the ground disturbance shall be modified to avoid the potentially significant resource, and the work shall then proceed consistent with the provisions of MM-CULTURAL-1. An archaeological monitor shall be present during ground-disturbing activities. In addition, consultation shall be undertaken with the local Native American Tribal contacts designated by the NAHC to determine if a Native American monitor shall also be present during all or a portion of the ground-disturbing activities. 2. Where avoidance is not feasible, a Phase II evaluation of the cultural resources shall be undertaken to determine the significance of the cultural resource. If the Phase II investigation identifies a unique/eligible cultural resource within the area proposed for ground-disturbing work, Metro shall determine whether to avoid the resource through redesign or proceed with a Phase III data recovery program consistent with the provisions of a Cultural Resource Management Plan. The work shall then proceed consistent with the provisions of MM-CULTURAL-1.	
The proposed project would have the potential to result in significant impact on archaeological resources as defined in Section 15064.5(b) of the State CEQA Guidelines.	MM-CULTURAL-1 and MM-CULTURAL-2	Less than Significant Impact
The proposed project would have the potential to result in significant impacts to paleontological resources as defined in Section 15064.5(b) of the CEQA Guidelines.	MM-CULTURAL-3: *Paleontological Resources – Paleontological Monitoring*. Impacts to cultural resources related directly or indirectly to the destruction of a unique paleontological resource from the proposed project shall be reduced to below the level of significance by monitoring, salvage, and curation of unanticipated paleontological resources discovered during ground-disturbing activities in previously undisturbed native soils located 6 or more feet below the ground surface that would have the potential to contact geologic units with a high to moderate potential to yield unique paleontological resources. Ground-disturbing activities include, but are not limited to, drilling, excavation, trenching, and grading. If paleontological resources are encountered during ground-disturbing activities, work stops, an assessment of the site is conducted. No work shall proceed within	Less than Significant Impact

TABLE ES.7-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Proposed Project Impacts	Mitigation Measures	Level of Significance after Mitigation
	immediate vicinity until (cite conditions). At the time that work is continued to be authorized, Metro shall require and be responsible for salvage and recovery of those resources consistent with standards for such recovery established by the Society of Vertebrate Paleontology. Paleontological Resource Sensitivity Training shall be required for all project personnel prior to the start of ground-disturbing activities in geologic units with a moderate to high potential to yield unique paleontological resources. This shall include a brief field training that provides an overview of fossils that might potentially be found, and the appropriate procedures to follow if fossils are identified. This requirement shall extend to any new staff joining the project. Construction monitoring by a qualified paleontological monitor shall be implemented during all ground-disturbing activities that affect previously undisturbed geologic units 6 feet or more below the ground surface and have the potential to encounter geologic units with a moderate to high potential to yield unique paleontological resources. In the event that a paleontological resource is encountered during construction, all ground-disturbing activity within 100 feet of the find shall be halted until a qualified paleontologist can evaluate the significant of the discovery. Additional monitoring recommendations may be required. If the resource is found to be significant, the paleontologist shall determine the most appropriate treatment and method for removing and stabilizing the specimen. Curation of the any significant paleontological finds shall be required with a qualified repository, such as the Natural History Museum of Los Angeles County. Within 90 days of the completion of any salvage operation or monitoring activities, a mitigation report shall be submitted to Metro with an appended, itemized inventory of specimens. The report and inventory, when submitted to Metro, shall signify the completion of the program to mitigate impacts to paleontological resources.	
The proposed project would have the potential to result in significant impacts to human remains as defined in Section 15064.5(b) of the CEQA Guidelines.	*MM-CULTURAL-4: Regulatory Requirements – Human Remains*. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are encountered during excavation activities, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby areas reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are or are believed to be Native American, s/he shall notify the NAHC in Sacramento within 24 hours. In accordance with Section 5097.98 of the California PRC, the NAHC shall immediately notify the person(s) it believes to be the Most Likely Descendant of the deceased Native American. The descendants shall complete their inspection and make a recommendation within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with Metro, the disposition of the human remains. The Most Likely Descendant's recommendation shall be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials. If Metro rejects the Most Likely Descendant's recommendations, the agency shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (14 California Code of Regulations §15064.5(e)).	Less than Significant Impact
The proposed project would have the potential to result in significant impacts to tribal resources as defined in Section 15064.5(b) of the State CEQA Guidelines.	MM-CULTURAL-1 and MM-CULTURAL-2	Less than Significant Impact
Energy		
The proposed project would result in no impacts in regard to conflicting with adopted energy conservation and other sustainability metrics in local plans.	No mitigation measures are required.	No Impact

TABLE ES.7-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Proposed Project Impacts	Mitigation Measures	Level of Significance after Mitigation
The proposed project would result in less than significant impact to using energy resources in a wasteful and inefficient manner.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in less than significant impacts in regard to decreasing reliance on fossil fuels such as coal, natural gas, and oil.	No mitigation measures are required.	Less than Significant Impact
Geology and Soils		
The proposed project would result in no impact to geology and soils in relation to exposing people or structures to potential substantial effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault.	No mitigation measures are required.	No Impact
The proposed project would result in a less than significant impact to geology and soils in relation to exposing people or structures to potential adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking.	No mitigation measures are required.	Less than Significant Impact.
The proposed project would result in a less than significant impact to geology and soils in relation to exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in no impact to geology and soils in relation to exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	No mitigation measures are required.	No Impact
The proposed project would result in a less than significant impact to geology and soils with regard to resulting in substantial soil erosion or the loss of topsoil.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in a less than significant impact to geology and soils in relation to being located on a geologic unit or soil that is unstable or that would become unstable as a result of the project.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in a less than significant impact to geology and soils in relation to being located on a expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in no impact to geology and soils in relation to having soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.	No mitigation measures are required.	No Impact
Hazards and Hazardous Materials		
The proposed project would result in less than significant impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	No mitigation measures are required.	Less than Significant Impact
The proposed project has the potential to result in significant Impacts to hazards and hazardous materials during construction in relation to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There would less than significant operational impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	MM-HAZ-1: If soil in the vicinity of the former railroad tracks alignment along Alameda Street and the rail spurs into the Forecourt parking area is planned for excavation and off-site disposal as part of the proposed Project improvements, soil shall be sampled and analyzed for the potential presence of petroleum hydrocarbons, metals and persistent pesticides. The samples should be analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), CCR Title 22 Metals, and organochlorine pesticides (OCPs) using United States EPA Methods 8015B(M), 8260B, 6010B/7471A, and 8081, respectively. This methodology should be documented in a Soil Management Plan prior to construction. During construction, soil excavations conducted on site shall be monitored for visible soil staining and odor. Impacted soils shall be disposed off site in accordance with pertinent local, state, and federal regulatory guidelines. MM-HAZ-2: If soil in the vicinity of the former gasoline station is planned for excavation and off-site disposal as part of the proposed Project improvements, soil sampling shall be performed along the west side of Alameda Street within the Project area, in the vicinity of the former gasoline station. Soil samples should be analyzed for the presence of TPH, VOCs, and lead using United States S EPA Methods 8015B(M), 8260B, and 6010B,	Less than Significant Impact

TABLE ES.7-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Proposed Project Impacts	Mitigation Measures	Level of Significance after Mitigation
	respectively. Prior to construction, a Soil Management Plan should be prepared. During construction, soil excavations conducted on site shall be monitored for visible soil staining and odor. Impacted soils shall be disposed off site in accordance with pertinent local, state, and federal regulatory guidelines. MM-HAZ-3: If yellow traffic markings are removed separately from the adjacent pavement, the markings shall be removed and sampled for lead chromate prior to construction, consistent with the current Caltrans' Standard Special Provisions (SSP). MM-HAZ-4: Should evidence of naturally-occurring oil seeps within the Project area, or impacted soil from a crude oil pipeline beneath Alameda Street be observed, the Caltrans Unknown Hazard Procedures shall be implemented during construction activities.	
The construction of the proposed project would have the potential to result in significant impacts to hazards and hazardous materials with respect to the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. There would be less than significant operational impacts to hazards and hazardous materials related to exposing schools to hazardous emission as a result of operation or maintenance of the proposed improvements.	MM-HAZ-1 through MM-HAZ-4	Less than Significant Impact
The proposed project would result in no impacts to hazards and hazardous materials in relation to being located on a site which is included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to hazards and hazardous materials in relation to being located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to hazards and hazardous materials in relation to being located within the vicinity of a private airstrip.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to hazards and hazardous materials in relation to impairing implementation of or physically interfering with an adopted emergency response plan or emergency evacuation plan.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to hazards and hazardous materials in relation to exposing people or structures to a significant risk or loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	No mitigation measures are required.	No Impact
Hydrology and Water Quality		
The proposed project would result in less than significant impacts to hydrology and water quality in relation to water quality standards or waste discharge requirements.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in no impacts to groundwater supplies or groundwater recharge. The project area is served by the LADWP municipal water supply system and would not use local groundwater.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to alteration of existing drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to alteration of existing drainage patterns in a manner that would result in flooding on-site or off-site.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts related to exceeding the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff.	No mitigation measures are required.	No Impact
The proposed project would result in less than significant impacts to hydrology and water quality in relation to substantial degradation of water quality.	No mitigation measures are required.	Less than Significant Impact

TABLE ES.7-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Proposed Project Impacts	Mitigation Measures	Level of Significance after Mitigation
The proposed project would result in no impacts to hydrology and water quality in relation to placement of housing within a 100-year flood hazard area.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to hydrology and water quality in relation to placement of structures within a 100-year flood hazard area.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to hydrology and water quality in relation to the failure of a levee or dam.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to hydrology and water quality in relation to the inundation by seiche, tsunami, or mudflow.	No mitigation measures are required.	No Impact
Land Use and Planning		
The proposed project would not result in impacts to land use and planning through the physical division of an established community.	No mitigation measures are required.	No Impact
The proposed project would not result in impacts to land use and planning in relation to a conflict with adopted or proposed land use plans, policies, or regulations.	No mitigation measures are required.	No Impact
The proposed project would not result in impacts to land use and planning in relation to a conflict with any applicable HCP or NCCP.	No mitigation measures are required.	No Impact
Mineral Resources		
The proposed project would result in no impacts to mineral resources in relation to the loss of availability of a known mineral resource of statewide or regional importance.	No mitigation measures are required.	No Impact
The proposed project would not result in impacts to mineral resources in relation to the loss of availability of a known mineral resource recovery site.	No mitigation measures are required.	No Impact
Noise		
The proposed project would result in less than significant impacts to noise related to exposure or generation of noise levels in excess of established standards.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in no impacts to noise in relation to generation of excessive ground-borne vibration or ground-borne noise.	No mitigation measures are required.	No Impact
The proposed project would result in less than significant impacts to noise in relation to permanent increases in ambient noise levels as a result of operation and maintenance of the proposed project.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in less than significant impacts to noise related to temporary or periodic increases in ambient noise levels from the proposed project.	No mitigation measures are required.	Less than Significant Impact
The proposed project would result in no impacts to noise in relation to public airports.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to noise in relation to private airstrips.	No mitigation measures are required.	No Impact
Population and Housing		
The proposed project would result in no impacts to population and housing in regard to inducing substantial population growth in an area, either directly or indirectly.	No mitigation measures are required.	No Impact
The proposed project would result in no impact to population and housing in regard to displacing substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to population and housing related to the displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere.	No mitigation measures are required.	No Impact
Public Services		
The proposed project would result in no impacts to public services related to fire protection.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts on public services related to police protection.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to public services in relation to schools.	No mitigation measures are required.	No Impact
The proposed project would not result in impacts to public services in relation to parks.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to public services in relation to other public facilities, such as libraries and hospitals.	No mitigation measures are required.	No Impact

TABLE ES.7-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES

Proposed Project Impacts	Mitigation Measures	Level of Significance after Mitigation
Recreation		
The proposed project would result in no impacts in regard to increasing the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts in regard to including recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	No mitigation measures are required.	No Impact
Transportation and Traffic		
The proposed project would result in no impact in regards to result in a substantial disruption to traffic during construction, which could include temporary street closures; temporary loss of regular vehicular or pedestrian access to existing land uses; temporary loss of an existing bus stop or rerouting of bus lines; or creation of traffic hazards.	No mitigation measures are required.	No Impact
The proposed project would result in significant impacts in regard to conflicting with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit. Specifically, significant impacts would occur related to intersections and freeway ramps.	No feasible mitigation measures have been identified.	Significant and Unavoidable Impact
The proposed project would result in no impact in regards to conflicting with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	No mitigation measures are required.	No Impact
The proposed project would result in no impact in regards to a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.	No mitigation measures are required.	No Impact
The proposed project would result in no impact in regards to substantially increasing hazards due to a design feature or incompatible uses.	No mitigation measures are required.	No Impact
The proposed project would result in no impact in regards to inadequate emergency access.	No mitigation measures are required.	No Impact
The proposed project would result in no impact in regards to conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	No mitigation measures are required.	
Utilities and Service Systems		
The proposed project would result in no impacts to utilities and service systems in relation to exceeding wastewater treatment requirements of the Los Angeles RWQCB.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to utilities and service systems in relation to the construction of new water or wastewater treatment facilities or expansion of facilities, causing significant environmental effects.	No mitigation measures are required.	No Impact
The proposed project would result in less than significant impacts to utilities and service systems in relation to the construction of new stormwater drainage facilities or expansion of existing facilities, which could cause significant environmental impacts.	No mitigation measures are required.	No Impact
The proposed project would result in no impact in regards to having sufficient water supplies to serve the project from existing entitlements and resources, or in regards to new expanded entitlements being needed.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to wastewater treatment capacity.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to the Bureau of Sanitation landfill capacity.	No mitigation measures are required.	No Impact
The proposed project would result in no impacts to federal, state, and local statutes and regulations related to solid waste.	No mitigation measures are required.	No Impact

CHAPTER 1.
INTRODUCTION

This Environmental Impact Report (EIR) is intended to serve as a public disclosure document that informs the Lead Agency, responsible and cooperating agencies, decision makers, and the general public of the environmental effects anticipated with the implementation of the Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The proposed project includes improvements on Alameda Street, Arcadia Street, Los Angeles Street, and the Los Angeles Union Station Forecourt. This EIR includes project alternatives (including the No Project Alternative), documents the project's potential environmental effects pursuant to the requirements of the California Environmental Quality Act (CEQA), and proposes mitigation measures, as applicable.

This EIR has been prepared in accordance with CEQA Guidelines (14 California Code of Regulations [CCR] §15000 et seq.). Pursuant to Public Resources Code (PRC) § 21067 of CEQA and 14 CCR §§15367 and §§15050 through 15053 of the CEQA Guidelines, the Los Angeles County Metropolitan Transportation Authority (Metro) is identified as the Lead Agency. The Lead Agency is "the public agency with the greatest responsibility for supervising or approving the project as a whole." Metro, as the Lead Agency, has the authority to approve the project and implement appropriate mitigation measures to reduce significant impacts. Metro owns Los Angeles Union Station (LAUS) and has land use approval authority over it.

1.1 Purpose of This Environmental Impact Report

All projects in the State of California are required to undergo environmental review in accordance with CEQA to determine if implementation of the proposed project would result in any environmental impacts. Accordingly, a project is defined as requiring environmental review pursuant to CEQA if it has the potential to result in either a direct physical change to the environment or a reasonably foreseeable indirect physical change to the environment. CEQA defines all actions that are supported in whole or in part through public agency contracts, grants, subsidies, or require a public agency to issue a lease, permit, license, certificate, or other entitlement to constitute a "project" requiring environmental review pursuant to CEQA. CEQA states the purpose of an EIR is to:

- Inform the public and decision-makers of the potential environmental impacts of a project
- Identify methods that could reduce the magnitude of potentially significant impacts of a project
- Identify alternatives that could reduce the magnitude of potentially significant impacts or propose more effective use of the project site

1.1.1 EIR Adequacy

The principal use of this EIR is to evaluate and disclose potential environmental impacts associated with the implementation of the proposed project. An EIR is an informational document and is not intended to determine the merits or recommend approval or disapproval of a project. Ultimately, the Metro Board

of Directors and decision makers must weigh the environmental effects of a project among other considerations, including planning, economic and social concerns.

The standards of adequacy of an EIR, defined by §15151 of the CEQA Guidelines, are as follows:

> An EIR should be prepared with a sufficient level of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes into account of environmental consequences. An evaluation of the environmental effect of the proposed project need not be exhaustive, but sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have not looked for perfection but for adequacy, completeness, and good faith effort at full disclosure.

Metro, acting as the CEQA Lead Agency, has a duty pursuant to CEQA Guidelines to neither approve nor carry out a project as proposed unless the significant effects have been reduced to an acceptable level, where possible (CEQA Guidelines §15091 and §15092). An acceptable level is defined as eliminating, avoiding, or substantially lessening the significant effects (impacts) resulting from the project. If such a reduction is not possible, a lead agency must adopt Findings of Fact and prepare a Statement of Overriding Considerations. As defined in CEQA Guidelines §15093, a Statement of Overriding Considerations balances the benefits of a project against its unavoidable environmental consequences.

1.2 CEQA EIR Process

1.2.1 Notice of Preparation

In accordance with Section 15063 of the State CEQA Guidelines, a Notice of Preparation (NOP) was prepared and distributed to the State Office of Planning and Research, responsible and trustee agencies, as well as private organizations and individuals that may have an interest in the project (Appendix A, *Notice of Preparation*). Due to the winter holidays, Metro extended the scoping period beyond the required 30-day circulation period for the NOP. The scoping period was initiated on December 22, 2016, and ended on January 31, 2017. The NOP was posted with the County Clerk's office and sent to the State Clearinghouse at the Governor's Office of Planning and Research. The NOP identified that an EIR would be completed for the proposed project.

The NOP presented a description of the proposed project, potential environmental effects, instructions on how to comment, and the date, time, and location of the public scoping meeting (Appendix A).

The NOP served as an opportunity for interested public and local agencies to comment on the project before the Draft EIR was written. The main areas of interest from the comments received in response to circulation of the NOP for public review was bicycle circulation, closure of the southern crosswalk on Alameda, and how the forecourt will be utilized.

1.2.2 Scoping

The public scoping meeting took place on Thursday, January 26, 2017, at 6:00 p.m. at Los Angeles Union Station, 800 N. Alameda Street, Los Angeles, California. The meeting was located in the Historic Ticket Concourse immediately adjacent to the Information Desk, West Portal. The meeting was attended by 45 people. The public comments deadline was three business days later on January 31, 2017. Metro received a total of 44 comments: 11 written comments, 31 email comments, and 2 letter comments. Comments addressed cycling connections, a pedestrian bridge (from LAUS to El Pueblo), traffic, parking, utilities, trees/landscaping, emergency access, bathrooms, and civic space uses.

1.2.3 Draft EIR Review Process

As allowed pursuant to the State CEQA Guidelines, Metro determined to go forward to preparation of an EIR, forgoing preparation of an Initial Study. Therefore, the EIR addresses the 18 environmental issues identified in the State CEQA Guidelines.

1.2.4 Draft EIR Review Process

In accordance with the CEQA Guidelines §21091, the Draft EIR will be available to the public review and comment for a 45-day period. During the public review period interested individuals, organizations, and agencies can provide written comments. All comments should be directed to:

Los Angeles County Metropolitan Transportation Authority
Elizabeth Carvajal, Metro Senior Manager
LAUS Forecourt and Esplanade Improvements
One Gateway Plaza, Mail Stop 99-23-4
Los Angeles, California, 90012-2952
Email: CarvajalE@Metro.net

The Draft EIR will be available for review at the following locations:

- Los Angeles Main Library
  630 West 5th Street
  Los Angeles, CA 90071

- Chinatown Branch Library
  639 N. Hill Street
  Los Angeles, CA 90012

- The Metro project website: https://www.metro.net/about/union-station/la-union-station-forecourt-and-esplanade/

Metro will receive written public input on the Draft EIR during the public comment period which extends from August 11, to September 25, 2017. Due to the time limits mandated by state law, comment must be sent to Metro at the earliest possible date, but no later than September 25, 2017, at 5:00 p.m. The agency response to this Draft EIR should include the name of the contact person with the commenting agency.

1.2.5 Final EIR Process

The Final EIR process includes presenting the response to public comments on the Draft EIR, the mitigation monitoring and reporting program, the Findings of Fact, and Statement of Overriding Considerations for consideration by the Metro Board of Directors. This is anticipated to occur in late 2017 or early 2018. This Board meeting will be publicized via the project website, Facebook, and Twitter. Anyone who comments on the Draft EIR and provides either a valid email or street address will be directly notified of this meeting 10 days prior.

1.2.6 Other Outreach Efforts

Metro is planning on conducting a public hearing workshop during circulation of the Draft EIR for public review. Oral translations will be available at the open house meetings in any language upon request. Meeting materials will also be translated into Spanish and Mandarin, and Korean and Japanese upon request. The date, time, and location of the meeting will be publicized via the project website, Facebook, and Twitter.

Metro will continue to meet with elected officials, other government agencies, and individual stakeholder groups throughout the process, as appropriate. For any questions, comments, and feedback, stakeholders can contact Elizabeth Carvajal at Metro either by mail, phone, or email.

One Gateway Plaza, Mail Stop 99-23-4 Los Angeles, CA 90012

Tel: 213-922-3084

CarvajalE@metro.net

1.3 Areas of Public Concern and Known Controversy

Public comments submitted during the scoping period focused on the following topics:

- Pedestrian circulation
- Bicycle infrastructure, circulation, and parking
- Bicycle path on Los Angeles Street
- Closure of the southern crosswalk on Alameda
- Proposed uses of the forecourt

- Landscaping and tree removals/additions
- Protection of eligibility of LAUS for Listing in the National Register of Historic Places
- Avoidance and minimization of impacts to tribal cultural resources
- Avoidance and minimization of impacts on historic and archeological resources
- Monitoring of excavations by qualified archeologists and Native American representatives
- Minimization of impacts on utilities under Alameda and First Street and adjacent sidewalks
- Traffic congestion; traffic associated with the Express Lanes on ramp
- Effect of parking lot removal on LAUS drop-off/pick-up
- Inclusion of Father Serra Park

1.4 Organization of the EIR

The content and format of this EIR are designed to meet the current requirements of CEQA and the CEQA Guidelines.

Executive Summary: This section presents a summary of the proposed project and alternatives considered in this EIR, identifies areas of controversy and issues to be resolved, and provides a summary of potential environmental impacts and mitigation measures.

Chapter 1.0 – Introduction: This chapter describes the purpose and organization of the EIR and its preparation, review, certification, and permitting process.

Chapter 2.0 – Project Description: This chapter provides a description of the project goals and objectives and outlines specific details of the proposed project.

Chapter 3.0 – Environmental Impact Analysis and Mitigation Measures: This chapter provides a description of the environmental setting, regulatory compliance, significance criteria, significant direct, indirect, and cumulative impacts for each environmental resource area. Where significant impacts are identified as a result of the analysis, feasible mitigation measures are identified.

Chapter 4.0 –Alternatives: This chapter describes alternatives considered, compares the relative impacts to those of the proposed project, and provides a brief description of alternatives considered.

Chapter 5.0 – CEQA Considerations: This chapter discusses issue areas identified within CEQA that require analysis. These issue areas include: significant environmental effects that cannot be avoided if the proposed project is implemented, significant irreversible environmental effects, and growth inducing impacts.

Chapter 6.0 – Persons and Sources Consulted: This chapter identifies agencies, organizations, and individuals consulted in preparing the EIR. It also identifies firms and individuals responsible for the content of this EIR.

Chapter 7.0 – References: This chapter provides the list of references cited.

Appendices: The appendices present data that support the analysis or contents of this EIR. Appendices are provided electronically on a compact disk (CD) contained within this document.

1.5 Relationship to Other Projects

There are several other projects in the vicinity of the project site that have influence on the proposed project. The Link Union Station (Link US) and California High Speed Rail (HSR) projects are under consideration to accommodate forecasted ridership increases, improve rail efficiency, and provide additional transit options for regional and statewide travelers. Both Link US and HSR are independent projects and not a component of the proposed project. It is anticipated that separate environmental review for these projects will be undertaken concurrent with preparation of this EIR, and that the certification of those environmental documents would likely occur after certification of this EIR. Therefore, the cumulative impact analysis in this EIR will consider Link US and HSR project components within the project study area, based on the preliminary planning studies that have been completed. In addition to Link US and HSR, the cumulative impact analysis considers several smaller pedestrian and bicycle projects in the project vicinity from the Connect US action plan as well as Father Serra Park Improvements Project, enhancement of existing crosswalks, and connection to the historic plaza and Union Station (see Section 2.7, *Related Projects*). It includes several smaller pedestrian and bicycle projects in the project vicinity.

California High Speed Rail (HSR)

On November 4, 2008, California voters passed Proposition 1A, the Safe, Reliable High-Speed Passenger Train Bond Act, and elected to commit $9.95 billion through the issuance of bonds to develop a clean, efficient high-speed train system that would link Southern California to Sacramento and the San Francisco Bay Area through the San Joaquin Valley. In early 2009, the U.S. Congress approved $8 billion as part of the American Recovery and Reinvestment Act to support the development and construction of a nationwide system of high-speed rail (HSR) corridors and to improve inter-city rail infrastructure in key corridors around the country. LAUS has been identified as one of the major HSR hubs.

Link Union Station (Link US)

The Link Union Station (Link US) project aims to reconstruct and raise the rail yard at LAUS. At its completion, Link US will allow run through rail service at the station in comparison to current, inefficient stub-end operations that require trains to enter and exit the rail yard on the same mainline spurs. Link US, by raising the rail yard, tracks, and platforms, generates the enabling work that will allow for a future expanded passenger concourse and more efficient platforms required for operations. Link US is currently undergoing environmental review with construction anticipated to begin in 2019 and continue through 2024.

Connect US Action Plan

Connect US is an action plan for connecting people with LAUS, the 1st/Central Regional Connector Station (estimated to open in 2020), and the historic neighborhoods that surround them. In response to public comments provided during the Union Station Master Plan process, Metro developed an implementable plan to improve pedestrian and bicycle linkages to LAUS, 1st/Central, and the surrounding historic and cultural communities.

The Connect US Action Plan was conceived as an Action Plan—an immediately usable and succinctly written tool focused on improvement projects that could be built now, or as soon as funding becomes available. The first step in the implementation process was incorporating the Connect US Action Plan provisions incorporated into the Mobility Plan 2035, which was adopted by the City of Los Angeles in September 2016.

Father Serra Park Improvements

In 2014, Metro was awarded $1 million in Proposition A – Los Angeles County Regional Park and Open Space District funds for general improvements and pedestrian enhancements to Father Serra Park and to improve the connections from the park to El Pueblo and LAUS. El Pueblo Historical Monument, which is located adjacent to the project site, will take the lead on the environmental clearance of a series of improvements to Father Serra Park. El Pueblo Historical Monument will work closely with the Bureau of Engineering for the completion of the required environmental clearances for the Metro grant-funded enhancements to Father Serra Park. The design and construction of the Father Serra Park Improvements would be coordinated between the City of Los Angeles and Metro per City Council File No. 15-0075, undertaken in coordination with Metro. The Father Serra Park Improvements will supplement and enhance the improvements from the proposed project. However, the Father Serra Park Improvements have independent utility from the proposed project. Metro is taking the lead in securing environmental clearance for the proposed project. Metro will take the lead in completing the design work and construction for both the proposed project and the Father Serra Improvements project.

CHAPTER 2
PROJECT DESCRIPTION

As recommended in Section 15134 of the State CEQA Guidelines, this chapter of the Environmental Impact Report (EIR) describes the precise location and boundaries of the Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project); a statement of project objectives; a general description of the project's technical, economic, and environmental characteristics; project elements; construction scenario and assumptions; a statement describing the intended uses of this document; and related projects.

2.1 Location

The project site is located on approximately 6.7 acres in the City of Los Angeles, in the northern portion of the downtown area (Figure 2.1-1, *Regional Vicinity Map*). The proposed project is located adjacent to and within Los Angeles Union Station (LAUS), at 800 North Alameda Street, City of Los Angeles, California 90012, in the U.S. Geological Survey Los Angeles 7.5-minute topographic quadrangle (Figure 2.1-2, *Project Location Map*; Figure 2.1-3, *Topographic Map with USGS 7.5-minute Topographic Quadrangle Index*). The LAUS property is generally bounded by Highway 101 to the south, Alameda Street to the west, Cesar E. Chavez Avenue to the north, and Vignes Street to the east. However, the project site is generally bounded by Alameda Street to the west, Cesar E. Chavez Avenue to the north, LAUS to the east, and Arcadia Street to the south. Specific project elements are located on Alameda Street from Arcadia Street in the south to Cesar E. Chavez Avenue in the north, Arcadia Street from Alameda Street to Spring Street, Los Angeles Street from El Pueblo de Los Angeles to LAUS, and the Union Station Forecourt area. Adjacent to the project to the west are the Chinese American Museum at 425 North Los Angeles Street, El Pueblo de Los Angeles State Historic Park at 125 Paseo De La Plaza, and the Avila Adobe Museum at 10 Olvera Street.

2.2 Statement of Objectives

The Los Angeles County Metropolitan Transportation Authority (Metro) anticipates increased visitors and transit riders utilizing LAUS as the population grows. Metro is committed to accommodating existing and future destination and through-transit demands, including those who desire to utilize alternate forms of transit, rather than automobiles. The project also supports local, regional, and state policies with regard to encouraging multi-modal travel. The need for the project is driven by safety and the need to better serve individuals who travel to LAUS to reach local neighborhoods and business, as well as those who travel to LAUS to make a connection to another mode of travel. The goal of the proposed project is to enhance connectivity to LAUS by creating a safer, more welcoming experience to transit riders and visitors.

Metro has identified seven primary requisite objectives:

- Protect and enhance LAUS as a national historic resource by advancing clear sight lines and view sheds to the station.[1]
- Prioritize connectivity, convenience, and safety for the most vulnerable users (pedestrians, bicyclists, transit patrons and community stakeholders) to safely navigate to and from the project site.[2][3]
- Advance desirable and accessible public space at the LAUS forecourt that creates a visually porous and permeable connection between Union Station and the surrounding historic and cultural communities.[4]
- Facilitate alternatives to driving by providing infrastructure that enables more walking and bicycling consistent with the objectives of Metro's *Climate Action and Adaptation Plan*.[5]
- Enhance the safety and quality of pedestrian and bicycle connections between the station and El Pueblo Historic Monument, Father Serra Park, Olvera Street, and nearby business and neighborhoods consistent with identified strategies in the *Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy*.[6,7]
- Advance sustainability by providing for reduced consumptive water use in a cost-effective manner consistent with the provisions of Metro's *Water Action Plan*[8] and improving multi-modal facilities that encourage active transportation and reduction in vehicle miles traveled.[9]
- Advance comprehensive planning for LAUS that leverages it as the major regional transportation hub, a destination, and one of the city's foremost landmarks.[10]

[1] National Park Service. 1980. *National Register of Historic Places Inventory Nomination Form.* Available at: https://npgallery.nps.gov/GetAsset?assetID=c72efa93-90ca-40ba-9ca6-ae3d3515cf37

[2] City of Los Angeles Department of City Planning. 2016*. Mobility Plan 2035*. Available at: http://planning.lacity.org/documents/policy/mobilityplnmemo.pdf. Accessed August 2, 2017.

[3] Los Angeles County Metropolitan Transportation Authority. 2015. *Connect US Action Plan*. Available at: https://media.metro.net/projects_studies/union_station/images/LAUSMP_Action_Plan_Final_100515.pdf

[4] County of Los Angeles Department of Public Health. November 2014. *The Plan for a Healthy Los Angeles*. Available at: http://publichealth.lacounty.gov/place/docs/FINAL_CTG%20HIGHLIGHTS%20Plan%20for%20Healthy%20LA_Nov%202014.pdf

[5] Los Angeles County Metropolitan Transportation Authority. June 2012. *Climate Action and Adaptation Plan*. Available at: http://media.metro.net/projects_studies/sustainability/images/Climate_Action_Plan.pdf. Prepared by ICF International.

[6] Southern California Association of Governments. April 2016. *Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.* Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf

[7] City of Los Angeles. Accessed 8 July 2017. Vision Zero. Los Angeles 2015-2025. Available at: http://visionzero.lacity.org/map/

[8] Los Angeles County Metropolitan Transportation Authority. June 2010. *Water Action Plan*. Prepared by ICF International and Brezak & Associates Planning. Available at: http://media.metro.net/projects_studies/sustainability/images/Water_Plan2010_0825.pdf.

[9] Southern California Association of Governments. April 2016. *Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.* Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf

[10] City of Los Angeles Department of City Planning. 2016*. Mobility Plan 2035*. Available at: http://planning.lacity.org/documents/policy/mobilityplnmemo.pdf. Policy 3.6, p. 88. Accessed August 2, 2017.

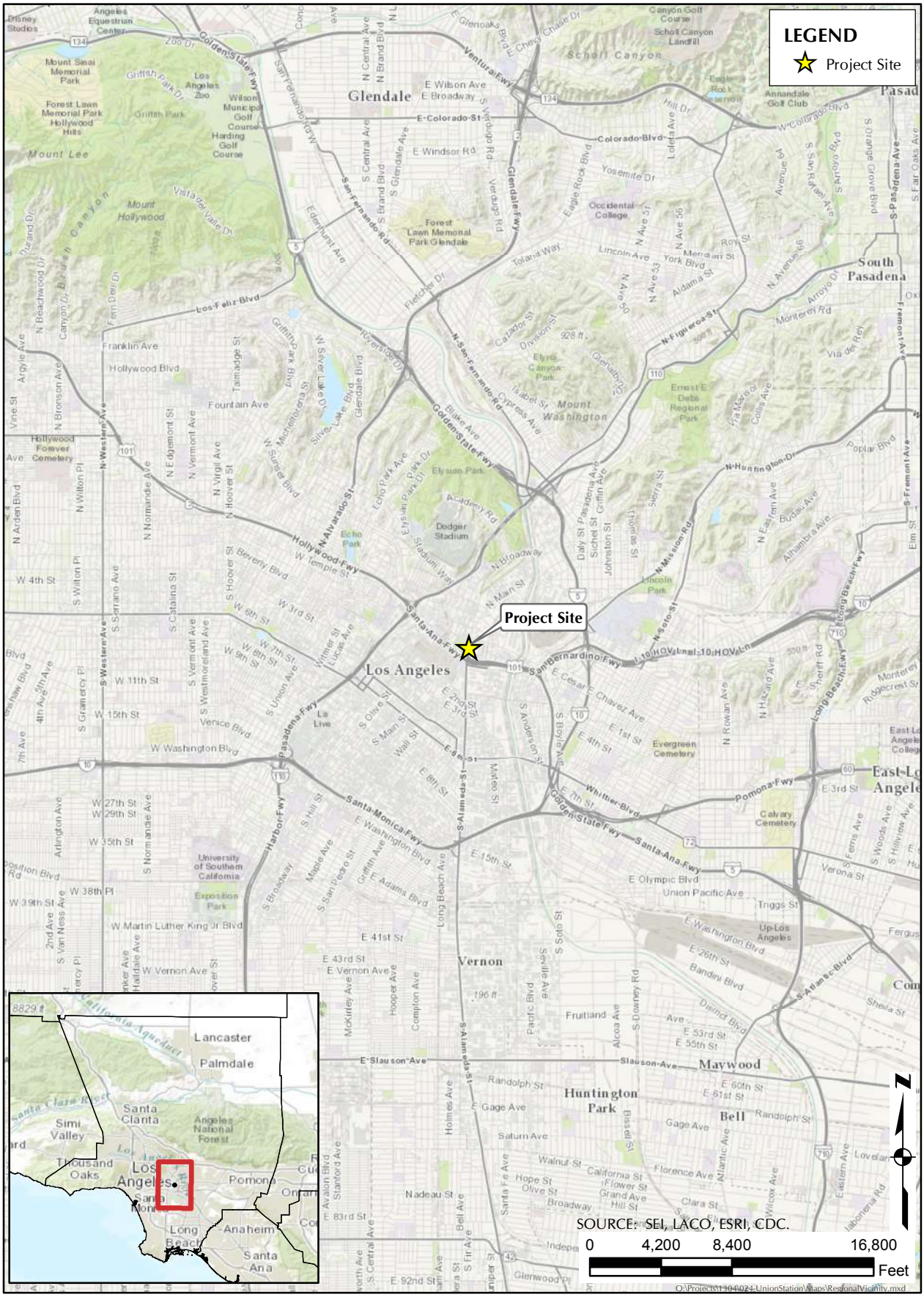


Figure 2.1-1. Regional Vicinity Map

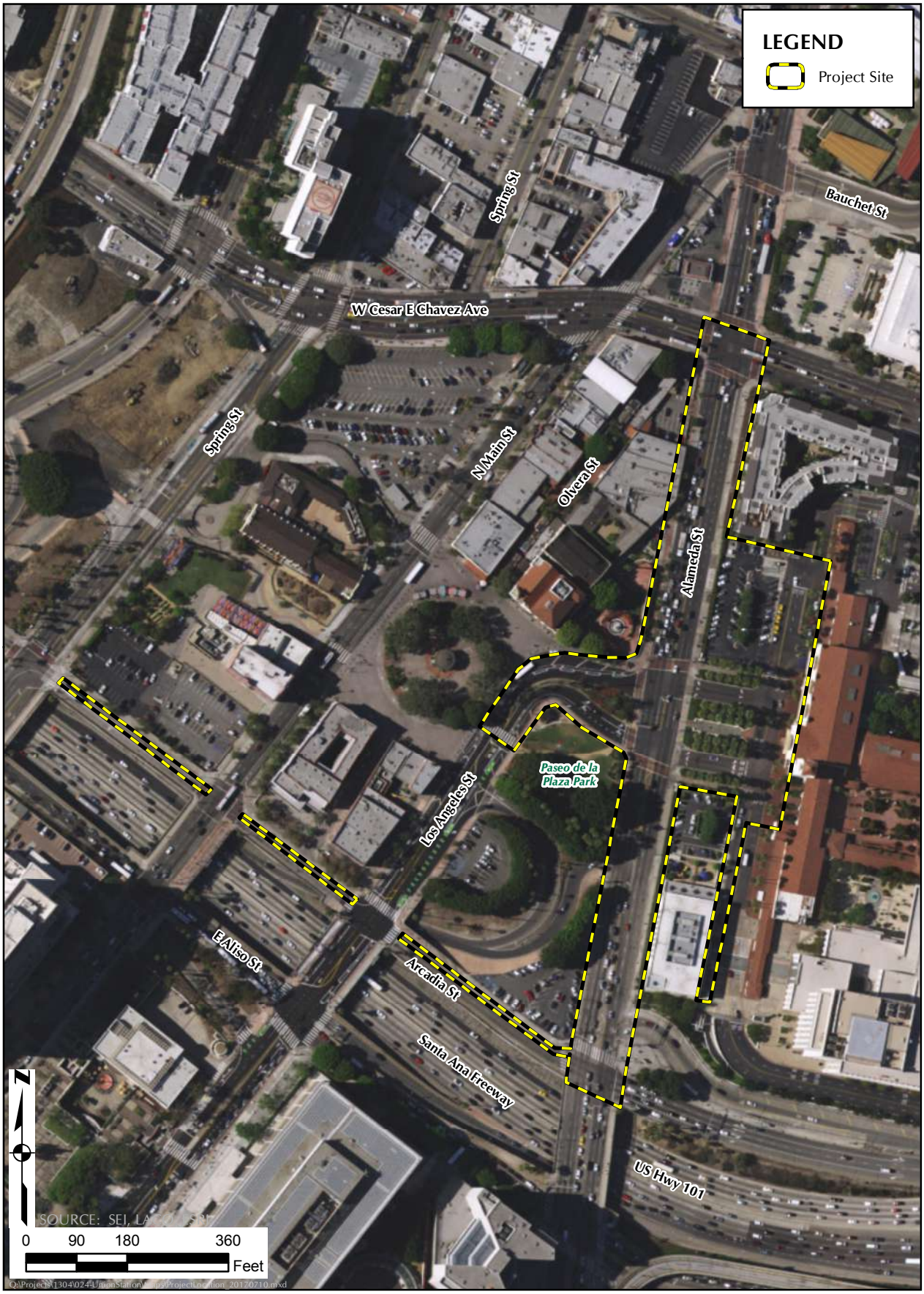


Figure 2.1-2. Project Location Map

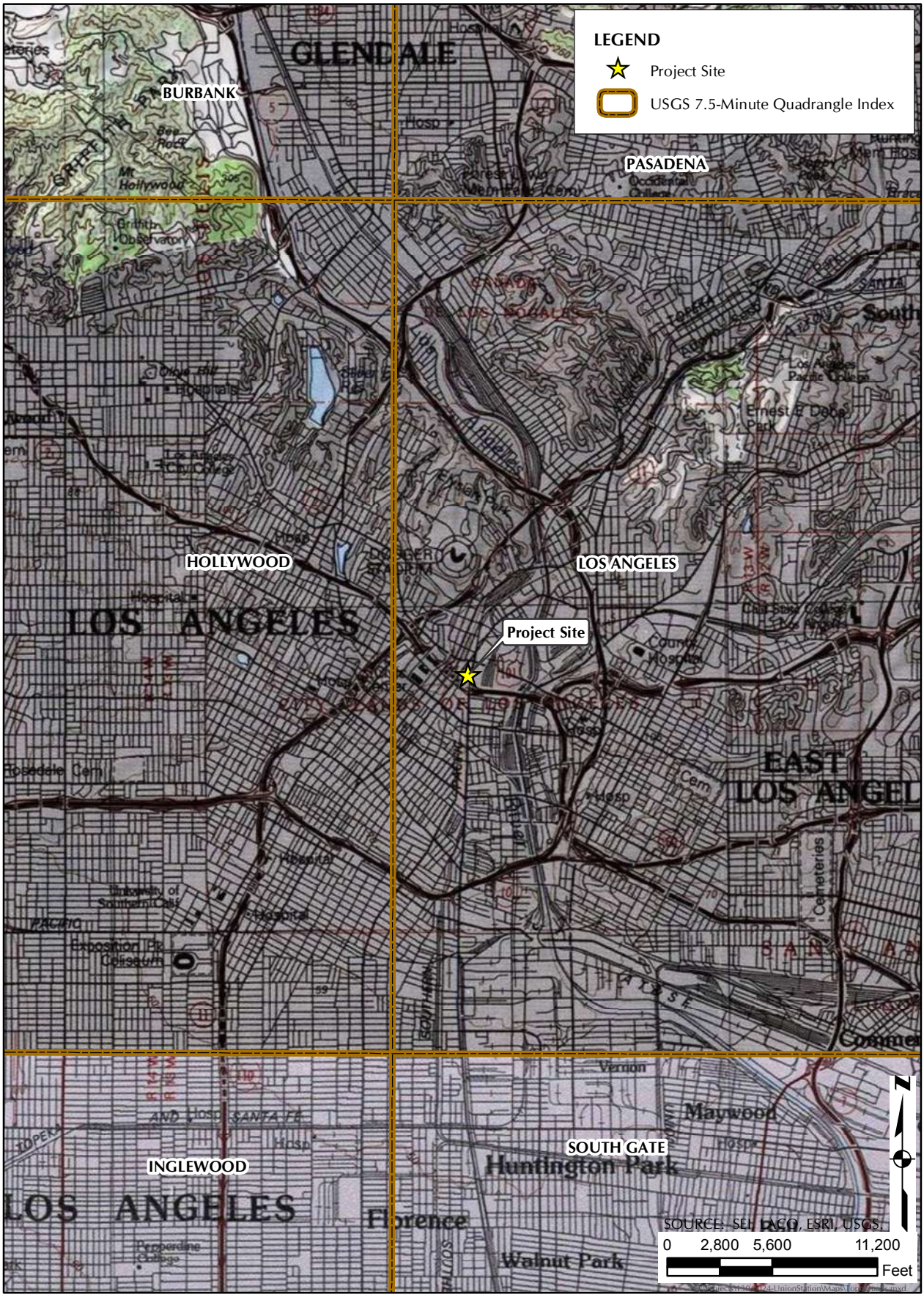


Figure 2.1-3. Topographic Map with USGS 7.5 Minute Quadrangle Index

2.3 Project Technical, Economic, and Environmental Characteristics

2.3.1 Technical

LAUS currently supports a variety of public transportation services for local, regional, and inter-city travel. LAUS is also a hub for Metro's extensive light rail and subway service network, with the Red, Gold, and Purple Lines converging there. The Metro rail network further extends via the Blue, Green, and Expo Lines.

In addition to Metro bus and rail options, Metrolink, Amtrak, LAX Flyaway Bus, and others utilize LAUS for regional rail commuters and airport travelers. The Metro local bus service includes routes to/from downtown Los Angeles, east/west and north/south routes in other parts of Los Angeles County, a 24-hour Owl Service, local shuttles, and several express or rapid service buses (such as the Silver Line). The facilities that support these services are primarily the existing rail lines and Patsaouras Bus Plaza.

According to a 2015 Metro Transforming LAUS Summary Report, there are approximately 110,000 passenger trips travelling through LAUS each weekday. Metro anticipates continued increases in regional population and employment will nearly double the demand on existing and planned modes of transportation, resulting in over 200,000 passenger trips through LAUS each weekday by 2040.[11]

2.3.2 Economic

There are several regional and local plans that have influence on the proposed project. The proposed project is subject to the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and 2009 Metro Long Range Transportation Plan. The proposed project is located within two City of Los Angeles planning areas with Alameda Street as the boundary: Central City North Community Plan and Central City Community Plan. The Central City North Community Plan includes the project areas west of Alameda Street, and the Central City Community Plan includes the project areas east of Alameda Street. These planning documents are summarized on the following pages.

2016–2040 SCAG RTP/SCS

SCAG developed a land use distribution pattern supported by land use strategies that are included in the SCS portion of the 2016-2040 RTP/SCS. This plan was updated to respond to updated land uses and reflect changes in the transportation network. The SCS outlines a plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The SCS focuses the majority of new housing and job growth in high quality transit areas (HQTAs) and other opportunity areas in existing

[11] Los Angeles County Metropolitan Transportation Authority. October 9, 2015. *Transforming Los Angeles Union Station.* Available at: https://media.metro.net/projects_studies/union_station/images/LAUS_Design_Report-Final_10-9-15.pdf

urbanized areas and suburban town centers, resulting in an improved jobs-housing balance and more opportunity for infill, mixed-used, and/or transit-oriented development. This overall land use development pattern supports and compliments the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures.

Metro Long Range Transportation Plan

Metro's current Long Range Transportation Plan (LRTP), which was adopted in 2009, identified a process for addressing transportation challenges in mobility, the environment, goods movement, and financial constraints. Metro is currently working to update the 2009 LRTP in order to outline a blueprint for how Metro will spend anticipated revenues in the coming decades. The goals for the future plan include operating and maintaining the current and planned system; continuing to deliver on commitments from the 2009 LRTP; and identifying new projects, programs, or initiatives. Metro anticipates adopting a new LRTP in 2017.

Alameda District Specific Plan

The City of Los Angeles will be preparing an update to the existing Alameda District Specific Plan (ADSP). The ADSP encompasses LAUS and Terminal Annex to the north. The ADSP was adopted in 1996 and is the guide for growth and development in the plan area.

City of Los Angeles Central City[12] and Central City North Community Plans [13]

The Central City Community Plan within the City of Los Angeles contains 2,161 acres. It is located south of Sunset Boulevard/Cesar Chavez Avenue, north of the Santa Monica Freeway (Interstate 10), east of the Harbor Freeway (Interstate 110) and west of Alameda Street. The plan area is surrounded by the communities of Central City North, Silver Lake-Echo Park, Westlake, Southeast Los Angeles and South-Central Los Angeles. The primary land uses within the Central City Community Plan Area include governmental, financial, and the industrial hub of Los Angeles. There is a small residential population.

The Central City North Community Plan Area within the City of Los Angeles contains 2,005 acres. It is bounded by the Los Angeles River to the east; the City of Vernon to the south; Alameda Street, Cesar E. Chavez Avenue, Sunset Boulevard, and Marview Avenue to the west; and Stadium Way, Lilac Terrace, and North Broadway to the north. The plan area is surrounded by the communities of Silver Lake-Echo Park, Central City, Boyle Heights, Southeast Los Angeles, and Northeast Los Angeles. The Central City North Community Plan encompasses three main cultural centers: Chinatown, parts of Little Tokyo, and parts of the original Mexican pueblo. LAUS is located within the Central City North Community Plan Area.

[12] City of Los Angeles Planning Department. January 2003. *Central City Community Plan*. Available at: https://planning.lacity.org/complan/central/ccypage.htm

[13] City of Los Angeles Planning Department. December 2000. *Central City North Community Plan*. Available at: https://planning.lacity.org/complan/central/ccnpage.htm

The Central City and Central City North Community Plans promote an arrangement of land uses, streets, and services that are meant to encourage and contribute to health, safety, welfare, and convenience of the people who live and work in the community.The City is currently in the process of updating the Central City and Central City North Community Plans.

2.3.3 Environmental

LAUS is the transportation hub for the largest city in California, integrating rail, public transit, automobile, bicyclist and pedestrian modes of transit in a single location. Following the 2011 purchase of LAUS, Metro began a master planning process aimed at upgrading and enhancing the facility to accommodate future growth. The resulting plan, the Union Station Master Plan (USMP) commenced in August 2012 and was completed in the fall of 2014. The USMP area includes Metro's properties and one adjacent non-Metro property in close proximity to the station. Metro's current holdings include approximately 50 contiguous acres encompassing the historic station, the rail yard, associated transportation hub facilities, the Gateway Building that serves as Metro's headquarters, and a nearby site currently operated by a restaurant. This EIR analyzes and presents the potential environmental impacts associated with implementation of the projects previously identified as Phase I of the USMP.

The project site includes the viewshed of the west façade of the historic Union Station Terminal, a sidewalk and paved fire access road along the west façade, 70 iconic palm trees, landscaped planters flanking the north and south pedestrian paths and a historic entry plaza with sundial leading to the main entrance of the historic Union Station Terminal, a sidewalk along the parking lot and eastern façade of the La Petite Academy/First 5 LA building, and a paved parking lot at LAUS. LAUS was constructed between 1936 and 1939. It was listed in the National Register of Historic Places on November 13, 1980, under Criterion C and is significant on the national level. It was designated as a Los Angeles Historic Cultural Monument (HCM No. 101) on August 2, 1972.[14] The Monument boundary includes the project site, whereas the National Register nomination does not.

[14] Los Angeles Office of Historic Resources. August 2, 1972. *HCM No. 101.* Listing available at: http://www.preservation.lacity.org/files/HCM%20Database%20Updated%20113007.pdf

2.4 Project Elements

The proposed project would focus on perimeter improvements to improve pedestrian accessibility and connectivity (Figure 2.4-1, *Existing Site Plan*). It would consist of four general project components: the Alameda Street Improvements, the Forecourt Improvements, the partial closure of Los Angeles Street, and the Arcadia Street El Pueblo tour bus parking (Figure 2.4-2, *Project Plan*).

The proposed improvements to LAUS include:

- Removing the short-term parking northwest of the entrance to LAUS (approximately 60 spaces) to create a new civic plaza with an outdoor seating area
- Creating a new esplanade along Alameda Street (between Cesar E. Chavez Avenue and Arcadia) by narrowing the roadway and reallocating roadway area for the expanded pedestrian and bicyclist multi-use esplanade on the eastside and widened sidewalks on the west
- Reconfiguring the entrance from LAUS to the El Pueblo de Los Angeles State Historic Park by creating a consolidated crosswalk that would provide additional pedestrian and bicycle connectivity through the partial closure of Los Angeles Street and closure of the northern LAUS driveway on Alameda Street
- Repurposing the northernmost travel lane on Arcadia Street between Alameda Street and Spring Street into a tour bus parking area designated for El Pueblo.

With regard to the proposed Alameda Street Esplanade, its elements would include:

- Changing three travel lanes in each direction and a left turn center lane to two lanes of travel with a left turn lane/center median and curb side drop-off on the east side of Alameda Street
- Expanding sidewalks on both sides of the street into the roadway
- Creating a shared tree-lined multi-use path for both bicyclists and pedestrians on the east side of Alameda Street.

2.4.1 Alameda Street Improvements

The Alameda Street improvements are critical because they are key features in changing the overall pedestrian environment and would improve connections to the surrounding neighborhoods. Changes in the design of Alameda Street would fulfill the basic goal of strengthening the connections between the historic center of Los Angeles in El Pueblo and the historic Union Station, creating a unified urban ensemble.

The Alameda Esplanade Improvements are part of a larger set of improvements envisioned by Metro and the City of Los Angeles that would transform an important thoroughfare into a true “alameda” (Spanish for tree-lined avenue). The primary purpose is to balance all travel modes and make the street more inviting for people to walk and bike between Union Station and Little Tokyo/Arts District to the south, and Chinatown/Cornfield Arroyo Seco to the north.

Figure 2.4-1. Existing Site Plan

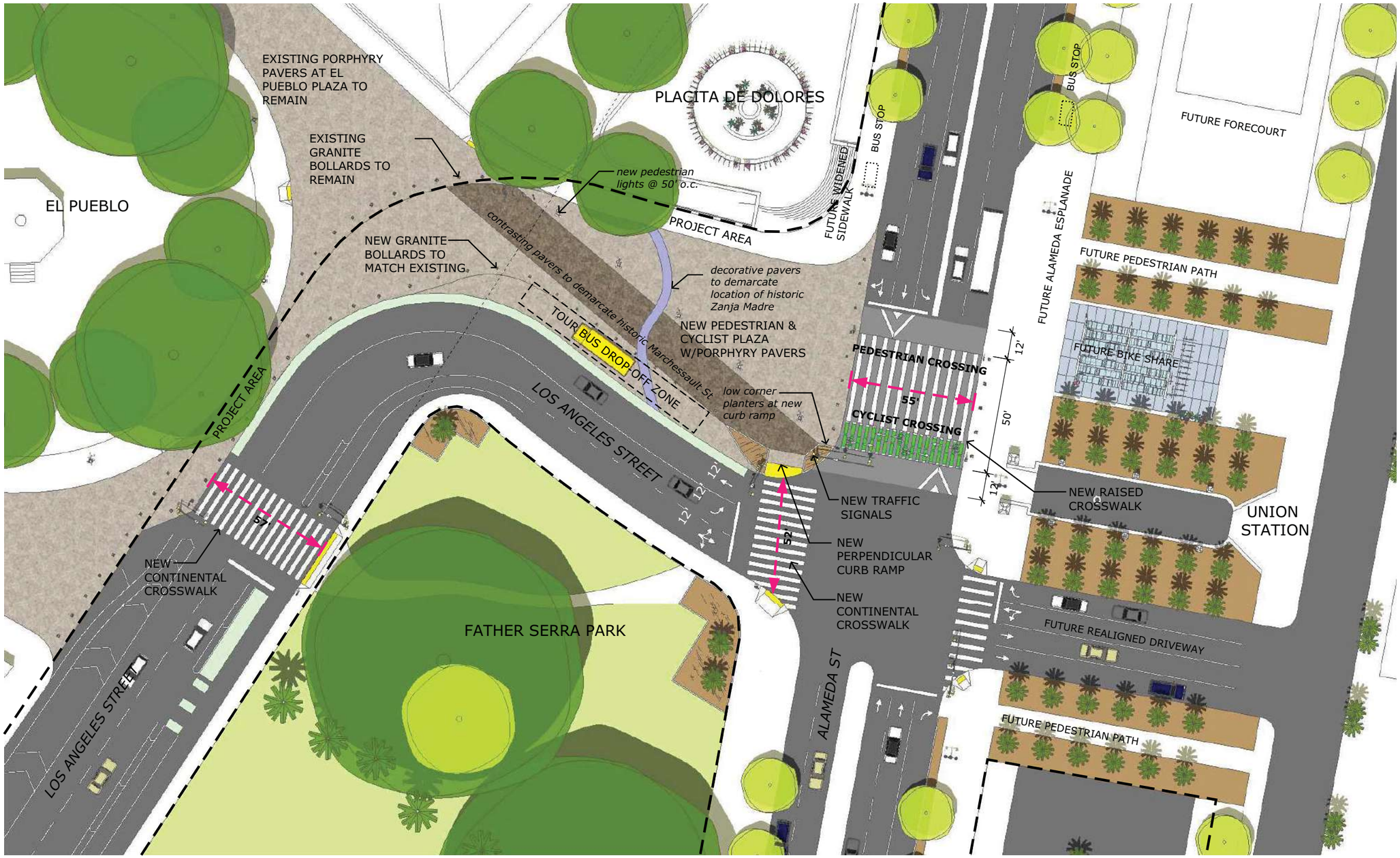


Figure 2.4-2. Project Plan

The esplanade would ultimately connect to the City of Los Angeles' proposed streetscape and bike lanes on N. Spring Street and would be in close proximity to the Alameda Esplanade that would be sited between 1st Street and Commercial Street in Little Tokyo.

Narrowing of the roadway would further support the pedestrian safety and connection between Union Station and El Pueblo/La Plaza. The number of through travel lanes would be reduced from six to four, plus left-turn and right-turn lanes, in addition to a drop-off area cut into the curbside lane. Sidewalks would be widened to accommodate more areas for pedestrians, drop-offs and bikes.

New project elements on Alameda Street include:

- On the east side of Alameda Street, a two-way pedestrian/bicycle esplanade would be placed in front of Union Station. This esplanade would be a mixed-use path (pedestrians and bicyclists would share the same right of way) with a row of trees on either side of the path to provide ample shade.
- New curbside vehicular drop-off zones are planned along the east side of Alameda Street at select locations (this would repurpose one vehicle travel lane northbound on Alameda Street). A right turn lane to Cesar E. Chavez Avenue from Alameda Street is planned.
- On the west side of Alameda Street, the sidewalks would be widened, eliminating one vehicle lane southbound.

2.4.2 Los Angeles Street Improvements

To strengthen the pedestrian connection between the historic Union Station and the historic El Pueblo District/ La Plaza, the northern (outbound) driveway would be closed to vehicle traffic, and would be used for pedestrian circulation and bike sharing amenities. The southern driveway would have two-way vehicular traffic.

To further enhance the connection between LAUS and the historic El Pueblo District/La Plaza, the two existing east-west crosswalks across Alameda Street would be consolidated into one pedestrian crossing across Alameda Street. The crossing would be raised to curb level to provide a continuous pedestrian plane from the Forecourt across to El Pueblo. The slopes on either side of the raised crossing would be designed to accommodate heavy vehicles, including public transit buses and trucks. The crossing would also accommodate a differentiated bicycle crossing adjacent to the pedestrian crossing. The signalization for the intersection would provide a pedestrian crossing free from vehicle conflicts, by protecting vehicle turn phases via signalization, and operating only non-conflicting vehicle phases concurrent with the crossing. No-right-turn-red restrictions would also be implemented.

The northern leg of Los Angeles Street would be closed to vehicular traffic, and two-way traffic would be consolidated on the southern leg. The existing southbound buffered bicycle lane on Los Angeles Street would be shifted to the south with the movement of the curb, but would be replaced to provide a bicycle facility of equal quality.

In summary, the new project elements would include:

- Partial closure of Los Angeles Street at Alameda/El Pueblo de Los Angeles
- Closure of the northern driveway into LAUS from Alameda Street as part of a reconfigured entrance to LAUS. This change would allow for an enhanced crosswalk to the El Pueblo de Los Angeles State Historic Park across Alameda Street and into Los Angeles Street.

2.4.3 Arcadia Street Improvements

The existing easternmost travel lane on Arcadia Street westbound between Alameda Street and Spring Street would be used as a tourist bus parking zone designated for El Pueblo.

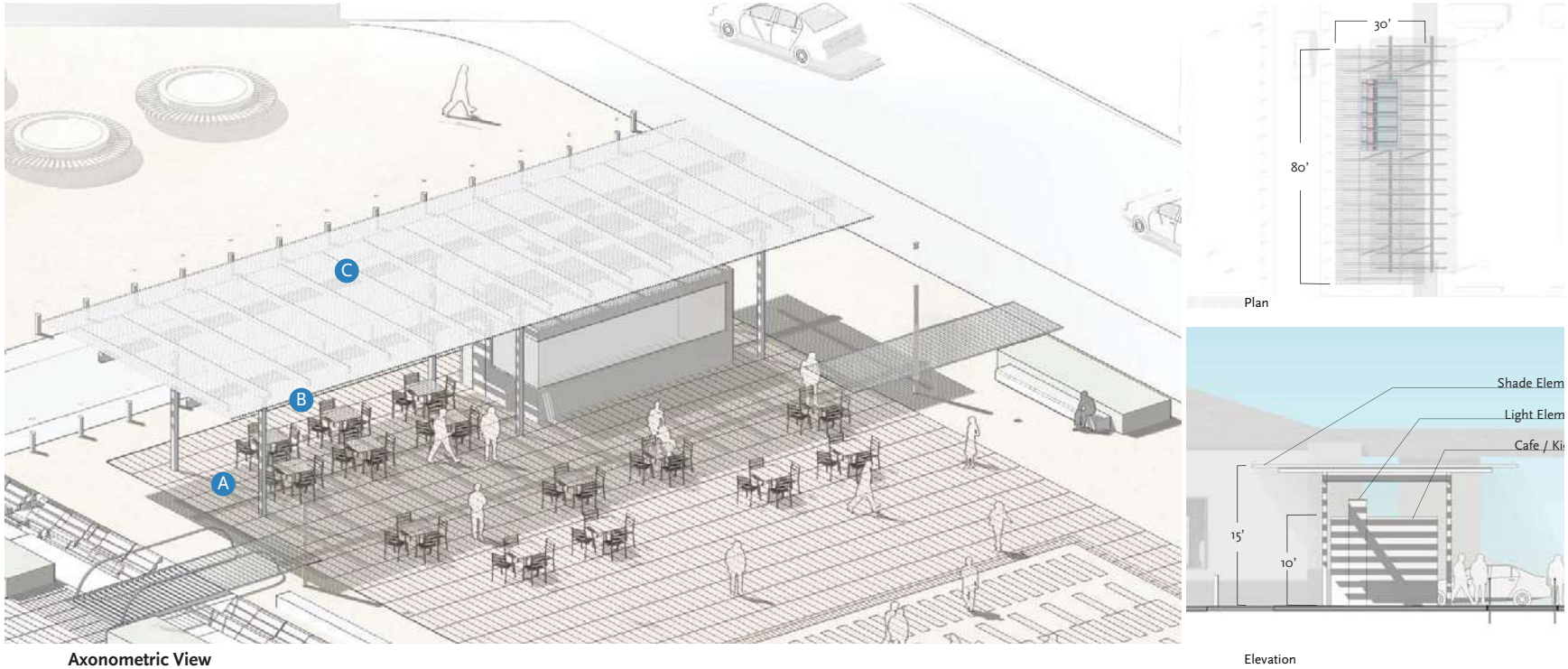
2.4.4 Forecourt Improvements

The Forecourt would be a civic open space that encourages pedestrian, bike, and transit use. The renovation of the existing Forecourt would convert the space immediately in front of LAUS into a true civic plaza with a stronger connection to El Pueblo**.** The Forecourt project has the potential to immediately improve connectivity to the station and signify an immediate, positive change in perception of the station. Circulation and streetscape improvements to Alameda Street would further enhance the station's doorstep, easing traffic and pedestrian conflicts and offering an aesthetically pleasing journey to the station's front door.

The approximately 60-space parking lot in front of LAUS would be turned into the Forecourt as a civic space, with sustainability components and a seating area. An approximately 10-foot-tall, 300-square-foot (20-foot by 15-foot) small transit-serving building would be constructed in the northern end of the Forecourt. Possible cladding materials include glazed or metal panel curtain wall systems, architectural pre-cast concrete, and terracotta. The building would be sheltered by an approximately 15-foot-high, 80-foot by 30-foot translucent shade structure. The building and shade element would provide amenities for pedestrians using the Forecourt area (Figure 2.4.4-1, *North Forecourt Plaza –Small Transit-Serving Building*).

2.4.5 Circulation

As a means to encourage transit ridership and create links to adjacent neighborhoods and the larger urban network of civic spaces, the proposed Forecourt would improve the pedestrian, cycling, and vehicular environment. This would include improving overarching wayfinding techniques, increasing site visibility, incorporating a multi-use bike path along Alameda Street, adding bike parking, increasing pedestrian crossings, and adding new vehicular drop-off/pick-up areas along Alameda Street.



Axonometric View

Figure 2.4.4-1. North Forecourt Plaza - Small Transit-Serving Building

Tracing back to its opening more than 75 years ago, Alameda Street is reconceived as a verdant, tree-lined esplanade with wide walkways that support pedestrian and bike circulation to the station and along its frontage. Consistent with the Metro "Connect US" Plan (formerly known as the Linkages Plan), Alameda Street has been identified as having the potential for removal of two lanes of traffic while continuing to encourage public transit, serving as an important north- south corridor, connecting Union Station to Chinatown and Little Tokyo/Art District.

Narrowing the roadway and increasing pedestrian capacity would greatly enhance and provide a safe connection between Union Station and Historic El Pueblo District/LA Plaza. The shared multi-use path along the east edge of the street, adjacent to Union Station, described as the "Alameda Esplanade," is designed to provide a continuous path to support more generous space for pedestrian and bike circulation. The Esplanade is conceived as a continuous walkway along Alameda Street between Cesar E. Chavez Avenue and Arcadia St. This space would be maximized as a strategic zone for stormwater detention that enables greater capacity for the tree roots to grow and also provides space for stormwater to collect, detain, and potentially infiltrate.

2.4.6 Landscaping

Related to the north-south alignment of the historic station, the proposed layout of the Forecourt is organized as a series of public spaces including smaller forecourts oriented north-south and framed by the double row of Sycamore or similar trees along Alameda to the west and a linear alignment of Olive or similar trees planted along the reconfigured driveway parallel to the historic station to the east. Trees and landscape features planted in the public right of way will adhere to requirements of the City of Los Angeles Bureau of Street Services.

Relating back to the overall Master Plan Open Space and Landscape Concept, the ecological conditions along the western edge of the Forecourt, including the Alameda Esplanade, would be supported by the planting of Sycamore or similar trees, understory plantings, and a successive swale system within the landscape buffer. The swale is designed to receive, convey, treat, detain and release/infiltrate stormwater from the Forecourt. To achieve the sustainability goals of the proposed project, the swale may incorporate purple pipes for recycled water usage and drought tolerant landscaping.

2.4.7 Stormwater Runoff Management

In an effort to provide sustainable site systems, the drainage of the forecourt would support stormwater capture and reuse, increasing climate comfort while supporting on-site landscape and urban ecology. For sustainability, the project aims to have the majority of the ground surfaces as decomposed granite and other porous paving materials, including volcanic porphyry pavers and porous concrete, to promote a porous ground plane and enhance pedestrian circulation.

2.5 Construction Scenario and Assumptions

The construction for the proposed project is anticipated to last 7 months with a start date of February/March 2020. The traffic analysis assumed a full build-out year of 2029 when high speed rail is planned to be operable at LAUS and Link US construction would also be complete. The proposed project would adhere to local noise ordinances and specified construction Best Management Practices, which would reduce impacts from construction on sensitive receptors.

2.5.1 Construction Assumptions

Construction assumptions for the proposed project include the following:

- Construction for the proposed project will adhere to the Metro Green Construction Policy and all City of Los Angeles standards and requirements in the public right-of-way.[15]
- Traffic lane closures may require a peak hour exemption approval from the Los Angeles Bureau of Engineering (LABOE).
- Demolition and construction activities shall be scheduled to avoid operating several pieces of equipment simultaneously, which causes high noise levels.
- The project contractor shall use power construction equipment with the most technologically advanced and proven noise shielding and muffling devices.
- Whenever construction occurs adjacent to occupied residences or other sensitive receptors (on- or off-site), temporary barriers shall be constructed around the construction sites to shield the ground floor of the noise-sensitive uses. These barriers shall be of three-quarter-inch medium density plywood sheeting, or equivalent, and shall achieve a sound transmission class (STC) of 30 or greater, based on certified sound transmission loss data taken according to American Society for Testing and Materials Test Method E90 or as approved by the City of Los Angeles Building Department.
- Construction equipment staging areas shall be located as far as feasible from residential areas and other sensitive receptors while still serving the needs of construction contractors.
- Routes for heavy construction site vehicles shall be identified to minimize noise impacts to residences and noise sensitive receptors. These hauling routes will be reviewed and approved by the Los Angeles Department of Transportation (LADOT). Activities that generate high noise levels—such as the use of jackhammers, drills, and impact wrenches—shall be restricted to the hours of 7:00 a.m. to 9:00 p.m. Monday to Friday and 8:00 am to 6:00 pm on Saturday.

[15] Los Angeles County Metropolitan Transportation Authority. 2011. *Green Construction Policy.* Available at: http://media.metro.net/projects_studies/sustainability/images/Green_Construction_Policy.pdf

- Corrosive Soils – Pavement engineering shall require the use of Type V cement. Type V cement is designed to have a high sulfate resistance and would limit the proposed pavements' susceptibility to being affected by underlying soils with elevated soluble sulfate content.
- Construction Management Plan (CMP) – The Contractor shall prepare a CMP to identify methods to minimize or avoid impacts from geologic hazards. At a minimum, the plan shall address the following geological and geotechnical constraints/resources:
- Unstable Soils. The contractor shall employ various methods to mitigate for the risk of ground failure from unstable soils. If potentially unstable soils are encountered at shallow depths, they may be excavated and replaced with competent soils. Unstable soils may also be strengthened using geosynthetics. Should unstable soils be discovered at greater depths, ground improvement methods, such as cement deep-soil-mixing, or jet-grouting, can be used. Alternatively, preloading—in combination with prefabricated vertical drains (wicks) and staged construction—can be used to slowly reinforce and compact soil without causing bearing-capacity failures.
- Soils with Shrink-Swell Potential. In locations where shrink-swell potential is unacceptable, soil additives shall be mixed with existing soil to reduce the shrink-swell potential. The CMP shall determine whether to remove or treat expansive soils. This decision will be based on the soils, specific shrink-swell characteristics, the additional costs for treatment versus excavation and replacement, as well as the long-term performance characteristics of the treated soil.

2.5.2 Construction Scenario

The construction crew would use a combination of gasoline and diesel on-road and off-road construction equipment and vehicles (Table 2.5.2-1, *Construction Equipment and Usage*).

Worker, vendor, and hauling trips were estimated using the quantities listed in the USMP Cost Plan. The Cost Plan assumed separate quantities for the Alameda Street and Los Angeles Street improvements and Forecourt improvements, which were combined to calculate the total number of trips for the Project.[16] Default worker trips were used for all phases of construction. Estimates for vendor and hauling trips during each construction phase are listed below.

[16] Los Angeles County Metropolitan Transportation Authority. 23 October 2014. Los Angeles Union Station Master Plan. Technical Memorandum: Concept Cost Plan. Prepared by: Grimshaw, Gruen Associates.

Demolition

- No vendor trips would occur.
- Roughly 120,000 square feet (SF) of pavement would be hauled. At an estimated ¼-foot depth, that would equal 30,000 cubic feet of pavement or 1,111 cubic yards (CY). Assuming 12 CY carried per truck, 92 truck trips would be required to haul away material.
- Thirty-eight (38) trees would be hauled away from the site, requiring 38 truck trips.

TABLE 2.5.2-1
CONSTRUCTION EQUIPMENT AND USAGE

Construction Phase	No. of Equipment	Equipment Type	No. Hours/Day	No. Days
Demolition (removal of parking lot, trees)				**40**
	1	Concrete Saw	8	
	1	Rubber Tired Dozer	8	
	3	Tractor/Loader/Backhoe	8	
	2	Hydraulic Excavator	6	
Grading				**40**
	2	Grader	6	
	1	Rubber Tired Dozer	6	
Paving (including striping/new configuration on Alameda St. and Los Angeles St.)				**30**
	1	Cement and Mortar Mixer	4	
	1	Pavers	6	
	1	Paving Equipment	8	
	1	Rollers	8	
	1	Tractor/Loader/Backhoe	8	
Site Preparation				**30**
	1	Grader	8	
	1	Rubber Tired Dozer	8	
	1	Tractor/Loader/Backhoe	8	

Paving

- The proposed project includes installation of 170,000 SF of sidewalk and pavement improvements to replace existing sidewalks, street lanes, and parking areas. At an estimated 1/4-foot depth, that would equal 42,500 cubic feet or 1,574 CY. Assuming 12 CY carried per truck, 131 truck trips, or 4.4 trips a day, would be required.
- Two vendor trips for water trucks were assumed.
- No hauling trips would occur.

Site Preparation

- Two vendor trips for water trucks were assumed.
- Eighty-seven (87) trees would be hauled to the site, requiring 87 truck trips.
- Ten (10) hauling trips would be made for landscaping.

2.6 Intended Uses of the EIR

The Draft EIR is being circulated to the public and agencies for review and comment. The document is meant to inform agencies and the public of the potential significant effects associated with the proposed project, describe and evaluate alternatives, and propose mitigation measures that would avoid or reduce the project's significant effects.

The EIR will be used to support the decision-making process related to project under consideration for approval by Metro and the City of Los Angeles. Information in the document will serve as the substantial evidence to develop the required environmental review and consideration by the California Department of Transportation (Caltrans), acting on behalf of the Federal Highway Administration (FHWA), for the consideration of authorization to expend Active Transportation Program (ATP) funds. The information contained in this EIR may also be used by other agencies when deciding whether to grant the permits or approvals necessary to construct, operate, or maintain the proposed project improvements.

The City is a cooperating responsible agency. Portions of the project would extend to public streets and sidewalks that are located adjacent to the property administered by Metro area, and within areas subject to the authority of the City. Many of the proposed project improvements are identified for the Alameda Street and Los Angeles Street public right-of-way. Metro has agreed to take the Lead Agency role in completing the environmental process, complete design, and construct the proposed improvements, including those on both Metro property and those located within the jurisdiction of the City. Metro will submit the design and construction for facilities within the City public right-of-way to theCity for review and consideration.

Metro has secured federal funds for the project, which requires compliance with the National Environmental Policy Act (NEPA) in the environmental documentation. Caltrans, acting on behalf of the FHWA, will serve as the Federal Lead Agency for the evaluation of the project. Metro has applied for, and was awarded Active Transportation Program (ATP) funds for two elements of the proposed project. Approval from the Division of Local Assistance at Caltrans will be required to receive these federal funds. Consistent with the provisions of 23 Code of Federal Regulations §771.117, Metro has prepared two Preliminary Environmental Studies (PES), tiering off the information contained in this EIR, and has submitted them to Caltrans for review. It is anticipated that a Categorical Exclusion (CE) will be used to demonstrate compliance of both project elements with NEPA. The analysis will adhere to the guidelines in the Local Assistance Procedures Manual, Chapter 6, Environmental Procedures, from Caltrans.

2.7 Related Projects

Cumulative impacts were evaluated in the Draft EIR in consideration of related projects located in the vicinity of the project (Figure 2.7-1, *Related Projects*). A 0.2 percent annual growth factor was assumed in the analysis based on data from the SCAG RTP model. The SCAG RTP model includes most of the expected growth in the study area. The traffic simulation included those projects in the SCAG RTP model and other related projects adjacent to LAUS. These projects are listed on the following page.

LA Metro

1. Link US
2. Cesar E. Chavez Avenue Bus Stop Improvement
3. Patsaouras Plaza Busway
4. West Santa Ana Branch Corridor

City of Los Angeles Bike Program and Active Transportation Corridors

5. Spring/Main Bike Lanes
6. San Pedro Bike Lanes
7. Alameda Esplanade (Commercial to 1st St)
8. 1st St Bike Lanes
9. Vignes to Santa Fe (Arts District to Union Station)

City of Los Angeles Department of Transportation

10. LA County Men's Jail
11. College Station
12. LA Plaza Culture Village Project (527 N. Spring St)

California High Speed Rail Authority

13. High Speed Rail

El Pueblo de Los Angeles

14. Father Serra Park Improvements Project

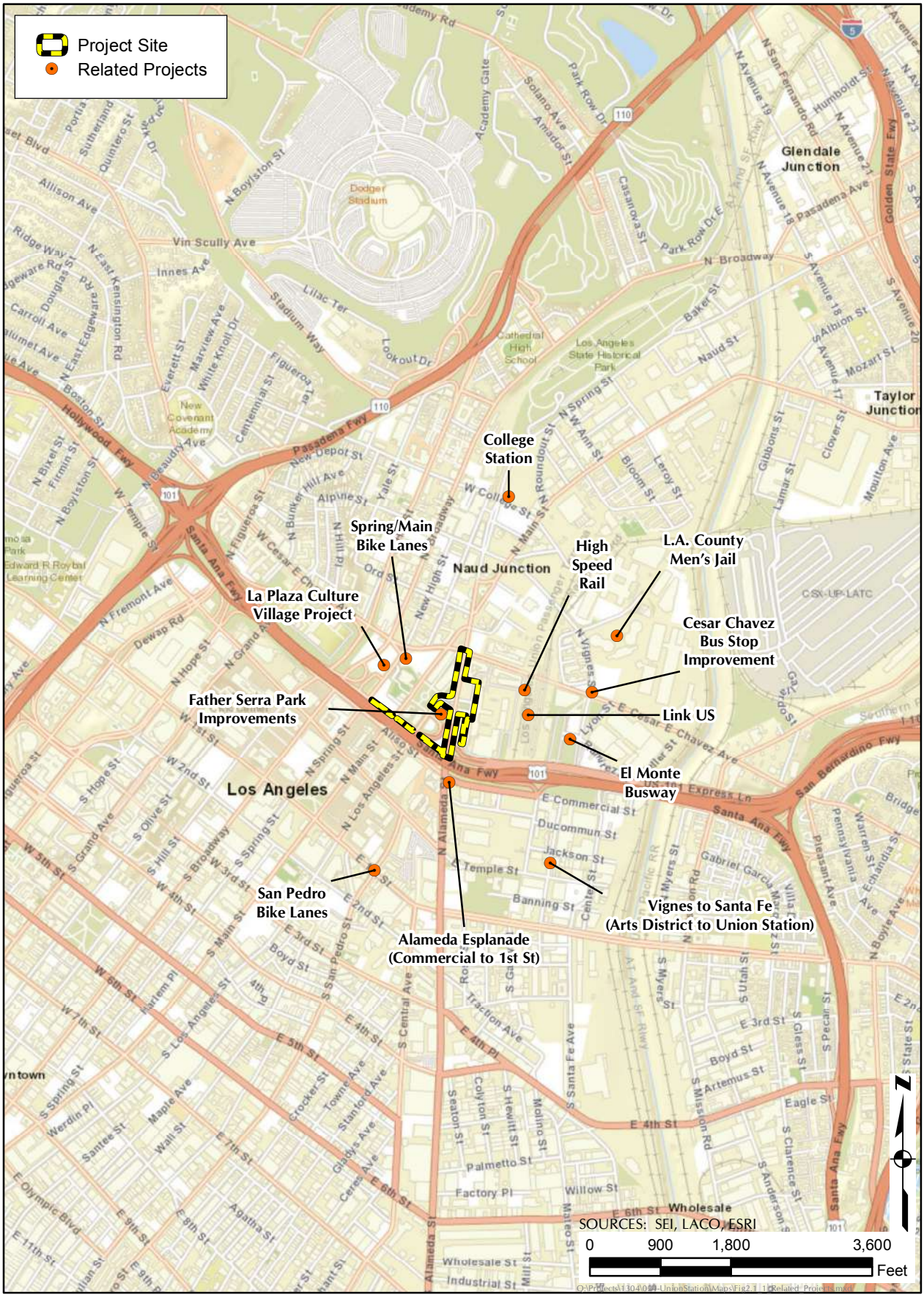


Figure 2.7-1. Related Projects

CHAPTER 3
ENVIRONMENTAL IMPACT ANALYSIS AND MITIGATION MEASURES

3.1 Aesthetics

This section of the Environmental Impact Report (EIR) analyzes potential impacts to aesthetics from construction, operation, and maintenance of the proposed Forecourt and Esplanade Improvement Project (proposed project). The analysis of aesthetics consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions in the project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

Aesthetics was evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines). Aesthetics within the project site was evaluated in relation to Section 4(f) of the U.S. Department of Transportation Act, the California Scenic Highways Program, the City of Los Angeles General Plan (including the Central City and Central City North Community Plans), and the Alameda District Specific Plan; a review of the California Department of Transportation (Caltrans) website, the City of Los Angeles' HistoricPlacesLA website, the City of Los Angeles' ZIMAS website, NASA Earth at Night aerial imagery; site reconnaissance conducted in April 2016 and February 2017; as well as geographic information systems (GIS) data for the project site.

3.1.1 Regulatory Setting

Federal

Section 4(f) of the U.S. Department of Transportation Act of 1966 (U.S. DOT Act)

Section 4(f) refers to the original section within the U.S. DOT Act that provided for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development. The law, now codified in 49 U.S. Code (USC) §303 and 23 USC §138, applies only to the U.S. DOT and is implemented by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) through 23 Code of Federal Regulations (CFR) 774. Section 4(f) only applies if the project has a federal nexus (i.e., requires a federal permit or receives federal funds).

Section 4(f) of the U.S. DOT Act (Public Law 89-670) was enacted as a means of protecting publicly owned public parks, recreation areas, and wildlife/waterfowl refuges as well as historic sites of local, state, or national significance, from conversion to transportation uses. The provision states that the Secretary of the U.S. DOT may approve a transportation project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge, or land from an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, recreation area, refuge or site) only if:

- There is no feasible and prudent alternative to using that land, and
- The program or project includes all possible planning to minimize harm to the Section 4(f) property.

  - **or** -
- The Section 4(f) use is *de minimis*.

State

California Department of Transportation (Caltrans) California Scenic Highways Program

The California Scenic Highways Program was created in 1963 under Senate Bill 1467, which added Sections 260 through 263 to the Streets and Highways Code, to preserve and protect scenic highway corridors from change that would reduce the aesthetic value of lands adjacent to highways.[1,2] According to Caltrans' Scenic Highway Guidelines, scenic highway corridors consist of land that is visible from, adjacent to, and outside the highway right-of-way, and is composed primarily of scenic and natural features. Topography, vegetation, viewing distance, and/or jurisdictional lines determine the corridor boundaries.[3] To be included in the state program, the highways proposed for designation must meet Caltrans' eligibility requirements and have visual merit. County highways and roads that meet the Caltrans Scenic Highways Program standards may also be officially designated.

The state laws governing the Scenic Highway Program are provided in the California Streets and Highways Code, Sections 260 through 263. The State Scenic Highway System includes a list of highways that have been designated by Caltrans as scenic highways or are eligible for designation as scenic highways. These highways are designated in Section 263 of the Streets and Highways Code. Scenic highway designation can offer the following benefits:

- Protection of the scenic values of an area;
- Enhancement of community identity and pride, encouraging citizen commitment to preserving community values;
- Preservation of scenic resources to enhance land values and make the area more attractive; and
- Promotion of local tourism that is consistent with the community's scenic values.

[1] California Department of Transportation. Accessed 17 February 2017. *Frequently asked questions.* Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/faq.htm

[2] California Department of Transportation. October 2008. *Scenic Highway Guidelines.* Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/guidelines/scenic_hwy_guidelines_04-12-2012.pdf

[3] California Department of Transportation. October 2008. *Scenic Highway Guidelines.* Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/guidelines/scenic_hwy_guidelines_04-12-2012.pdf

A scenic corridor is the land generally adjacent to and visible from the highway and is identified by using a motorist's line of vision. A reasonable boundary is selected when the view extends to the distant horizon. Caltrans outlines the following minimum requirements for scenic corridor protection (Section 261 of the Streets and Highways Code): (1) regulation of land use and intensity (density) of development, (2) detailed land and site planning, (3) control of outdoor advertising, (4) careful attention to and control of earthmoving and landscaping, and (5) the design and appearance of structures and equipment. Caltrans defines noncompliance for a Corridor Protection Program as a program that: (1) no longer complies with the five legislatively required elements under Section 261 of the Street and Highways Code, (2) no longer affords protection because required elements have been amended or changed, or (3) no longer is being enforced by the local governing body.

Local

City of Los Angeles General Plan

The proposed project site is located within the Alameda District Specific Plan area, within the Central City North Community Plan Area (CPA) on the eastern side of Alameda Street and within the Central City CPA on the western side of Alameda Street, and is subject to the goals and policies of the City of Los Angeles General Plan, including the Framework Element; the Central City North Community Plan and Central City Community Plan, a part of the Land Use Element of the City General Plan; the Conservation Element; and the Mobility Element.

Framework Element[4]

The Framework Element of the City's General Plan sets forth a citywide comprehensive long-range growth strategy; defines citywide policies that will be implemented through amendments to the City's community plans, zoning ordinances, and other pertinent programs; and provides fundamental guidance regarding the City's future. Chapter 5, *Urban Form and Neighborhood Design*, establishes the following goals, objectives, and policies relevant to aesthetics:

- **Goal 5A:** A liveable City for existing and future residents and one that is attractive to future investment. A City of interconnected, diverse neighborhoods that builds on the strengths of those neighborhoods and functions at both the neighborhood and citywide scales.
    - **Objective 5.2:** Encourage future development in centers and in nodes along corridors that are served by transit and are already functioning as centers for the surrounding neighborhoods, the community or the region.

[4] City of Los Angeles Department of City Planning. *The Citywide General Plan Framework: An Element of the City of Los Angeles General Plan.* Re-adopted August 8, 2001. Available at: https://planning.lacity.org/cwd/framwk/contents.htm

- **Policy 5.2.2:** Encourage the development of centers, districts, and selected corridor/boulevard nodes such that the land uses, scale, and built form allowed and/or encouraged within these areas allow them to function as centers and support transit use, both in daytime and nighttime (see Chapter 3: *Land Use*). Additionally, develop these areas so that they are compatible with surrounding neighborhoods, as defined generally by the following building characteristics.

- **Objective 5.3:** Refine the City's highway nomenclature and standards to distinguish among user priorities.
  - **Policy 5.3.1:** Establish the following highway segment hierarchy based on function and user priority:
    a. Pedestrian-priority segments, where designated in community centers, neighborhood districts, and mixed-use corridor nodes, are places where pedestrians are of paramount importance and where the streets can serve as open space both in daytime and nighttime. Generally these streets shall have the following characteristics (as defined through the Street Standards Committee and designated by amendments to the community plans to address local conditions):
       2) Sidewalks should be wide and lined with open canopied street trees, pedestrian-scale street lights provided to recognized standards commensurate with planned nighttime use, and other pedestrian amenities.

- **Objective 5.8:** Reinforce or encourage the establishment of a strong pedestrian orientation in designated neighborhood districts, community centers, and pedestrian-oriented subareas within regional centers, so that these districts and centers can serve as a focus of activity for the surrounding community and a focus for investment in the community.
  - **Policy 5.8-2:** The primary commercial streets within pedestrian-oriented districts and centers should have the following characteristics:
    a. Sidewalks: 15-17 feet wide (see illustrative street cross-sections).
    b. Mid-block medians (between intersections): landscaped where feasible.
    c. Shade trees, pruned above business signs, to provide a continuous canopy along the sidewalk and/or palm trees to provide visibility from a distance.
    d. Pedestrian amenities (e.g., benches, pedestrian-scale lighting, special paving, window boxes and planters).

Chapter 10, *Implementation Programs*, establishes the following Plan and Policy Implementation Program to carry out general plan policy relevant to the proposed project:

- **P24:** Formulate *citywide* development standards that:

  a. Enhance and/or conserve the appearance and functionality of residential and commercial areas, including appropriate applications for mixed-use structures that integrate housing with commercial uses. The following indicates a preliminary list of standards that may be considered.

  (9) Require street trees at the minimum spacing permitted by the Division of Street Trees.

  (10) Wherever possible, along secondary and major highways, require driveway access to buildings from side streets or alleys to minimize interference with pedestrian access and vehicular movement.

  b. Enhance the appearance and function of public infrastructure and development, considering:

  (1) Sidewalk improvement standards; location, appropriate width, species and spacing of trees as well as street furniture and street lighting.

  (2) Revise street tree standards, including species and placement to enhance pedestrian- oriented districts and centers with a continuous tree canopy. Broadleaf evergreen and deciduous trees should be used whenever feasible.

  (3) Revise street tree maintenance and removal standards.

- **P25:** Formulate local standards for designated pedestrian-oriented districts (neighborhood districts, community centers, some regional centers, and some mixed-use corridors) to account for each area's unique characteristics.

Downtown Design Guide: DESIGN for a LIVABLE DOWNTOWN (update underway)

To address implementation programs P24 and P25, the City of Los Angeles Department of City Planning founded a City Urban Design Studio in 2006 to build a better, more liveable city.[5] In June 2009, an interdepartmental City team developed the *Downtown Design Guide: DESIGN for a LIVABLE DOWNTOWN* to provide standards and guidelines for creating a liveable Downtown.[6] The 2009 design guide applies to the districts south of the Santa Ana Freeway, east of the Harbor Freeway, north of the Santa Monica Freeway, and west of the Central Industrial District, Produce District, and Arts District. The

[5] City of Los Angeles Department of City Planning. *Urban Design Studio: About the Studio.* Accessed 2 August 2017. Available at: http://www.urbandesignla.com/about.php

[6] City of Los Angeles Department of City Planning/Urban Design Studio, Community Redevelopment Agency, Department of Transportation and Public Works, and Cityworks Design. *Downtown Design Guide: City of Los Angeles.* 15 June 2009. Available at: http://www.urbandesignla.com/resources/DowntownDesignGuide.php

design guide is being updated and anticipated to include guidelines and standards which address the project site, including the El Pueblo District.

Alameda District Specific Plan[7]

The Alameda District Specific Plan provides regulatory controls and incentives for the systematic and incremental execution of that portion of the General Plan that relates to this geographic area and to provide for public needs, convenience and general welfare as the development of such area necessities; to assure for orderly development and appropriate capacity of public facilities for the intensity and design of development by establishing general procedures for development within the Specific Plan area; to provide continued and expanded development of the site both as a major transit hub for the region and as a mixed-use development in conformance with the goals and objectives of local and regional plans and policies; and to expand the economic base of the City by providing additional employment opportunities and additional revenues to the region. The Alameda District Specific Plan Area is bound by North Main Street, Vignes Street, and within the railroad right-of-way to near Leroy Street in the north; Vignes Street and Avila Street to the east; Arcadia Street and the Santa Ana Freeway (I-5/101) to the south; and Alameda Street to the west. The Specific Plan Area (SPA) is comprised of the Terminal Annex Property, the Los Angeles Union Station Property, and railroad right-of-way. The Specific Plan establishes the following goals, objectives, policies, and programs relevant to aesthetics:

- The Specific Plan requires the Director to issue a Project Plan Compliance before all grading permits, foundation permits, building permits, or use of land permits are issued on any lot located in whole or in part within the SPA.
- The Specific Plan establishes a maximum permitted height of 80 feet for any Project on a lot within the Historic Subarea (ADP-80/4.2), which is bound by Cesar Chavez Avenue to the north, West Plaza and the Los Angeles Union Station building to the east, El Monte Busway to the south, and North Alameda Street to the east.
- The height and massing of any Project on any lot fronting Alameda Street on the Los Angeles Union Station Site is restricted to forty-five (45) feet in two locations and restricted to sixty (60) feet in one location within the Historic Subarea, as shown on Map 6 of the Specific Plan.
- The maximum permitted height of any Project on a lot within the Mixed-Use/Office Subarea (ADP-400/4.2), as shown on Map 5 of the Specific Plan, shall be 400 feet.

[7] City of Los Angeles Department of City Planning. Effective June 18, 1996. *Alameda District Specific Plan.* A part of the City General Plan. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF

- Projects shall comply with the Urban Design Guidelines specified in Appendix A of the Specific Plan.

- The Specific Plan requires the preservation and rehabilitation of the significant historic elements of the Terminal Annex and Los Angeles Union Station buildings, except for those portions of the Los Angeles Union Station Building known as the "altered southern service wing" and the "south ramp," and the "1960's addition to the Terminal Annex building."

Central City North Community Plan[8] (update underway)

The approximately 2,005-acre Central City North Community Plan Area (CPA) is bound by the Los Angeles River to the east; the City of Vernon to the south; Alameda Street, Cesar Chavez Avenue, Sunset Boulevard, and Marview Avenue to the west; and Stadium Way, Lilac Terrace, and North Broadway to the north. The Community Plan establishes the following goals, objectives, policies, and programs relevant to aesthetics:

- **Goal 1:** A safe, secure, and high quality residential environment for all economic, age, and ethnic segments of the community.
    - **Objective 1-1:** To provide for the preservation of existing housing and for the development of new housing to meet the diverse economic and physical needs of the existing residents and projected population of the Central City North Plan area to the year 2010.
        - **Policy 1-1.2:** Protect the quality of the residential environment through attention to the appearance of communities, including attention to building and site design.
            - **Program:** The Plan includes an Urban Design Chapter which is supplemented by the Urban Design Guidelines and Standards for residential development.
    - **Objective 1-3:** To preserve and enhance the varied and distinct residential character and integrity of existing residential neighborhoods.
        - **Policy 1-3.1:** Seek a high degree of architectural compatibility and landscaping for new infill development to protect the character and scale of existing residential neighborhoods.
            - **Program:** The Plan includes Design Guidelines which establish design standards for residential development to implement this policy.

[8] City of Los Angeles Department of City Planning. Adopted December 15, 2000. *Central City North Community Plan*. A part of the General Plan. Available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

- **Policy 1.3-2:** Consider factors such as neighborhood character and identity, compatibility of land uses, impact on livability, impacts on services and public facilities, and impacts on traffic levels when changes in residential densities are proposed.
    - **Program:** A decision-maker should adopt a finding which addresses these factors as part of any decision relating to changes in planned residential densities.

- **Goal 2:** A strong and competitive commercial sector which best serves the needs of the community through maximum efficiency and accessibility while preserving the historic commercial and cultural character of the district.
    - **Objective 2-1:** To conserve and strengthen viable commercial development in the community and to provide additional opportunities for new commercial development and services.
        - **Policy 2-1.4:** Require that projects be designed and developed to achieve a high level of quality, distinctive character, and compatibility with existing uses and development.
            - **Program:** Chapter V-Urban Design proposes policies for commercial development which addresses this policy.
    - **Objective 2-2:** To attract uses which strengthen the economic base and expand market opportunities for existing and new businesses.
        - **Policy 2-2.3:** Require that the first floor street frontage of structures, including mixed use projects and parking structures located in pedestrian oriented districts, incorporate commercial uses.
            - **Program:** The Design Guidelines of this plan addresses this policy.
    - **Objective 2-3:** To enhance the identity of distinctive commercial districts and to identify pedestrian oriented districts.
        - **Policy 2-3.4:** Require that the first floor street frontage of structures, including mixed use projects and parking structures located in pedestrian oriented areas incorporate commercial uses.
            - **Program:** The Design Guidelines contained in Chapter V of the Plan addresses this policy.
    - **Objective 2-4:** To enhance the appearance of commercial districts.
        - **Policy 2-4.1**: Require that any proposed development be designed to enhance and be compatible with adjacent development.
            - **Program:** Conformance with the Design Guidelines of Chapter V will implement this policy.
        - **Policy 2-4.2:** Preserve community character, scale, and architectural diversity.
            - **Program:** Design Standards for commercial areas included in the Design Guidelines of the Plan implement this policy.

        - **Policy 2-4.3:** Improve safety and aesthetics of parking areas in commercial areas.
            - **Program:** Design standards for parking areas established in the Design Guidelines implement this policy.
        - **Policy 2-4.4:** Landscaped corridors should be created and enhanced through the planting of street trees along segments with no building setbacks and through median planters.
            - **Program:** The Design Guidelines include a section which establishes guidelines for community design and landscaping. These guidelines are intended to serve as a reference to other City Departments and public agencies and any private entities who participate in projects which involve improvements to public spaces and rights-of-way, including street scape and landscaping.

- **Goal 3:** Sufficient land for a variety of industrial uses with maximum employment opportunities which are safe for the environment and the work force and which have a minimal adverse impact on adjacent uses.
    - **Objective 3-1:** To provide for existing and future industrial uses which contribute job opportunities for residents and which minimize environmental and visual impacts to the community.
        - **Policy 3-1.2:** Adequate compatibility should be approved through design treatments, compliance with environmental protection standards and health and safety requirements for industrial uses where they adjoin residential neighborhoods and commercial uses.
            - **Program:** Environmental protection standards and health and safety requirements are enforced by other public agencies.
        - **Policy 3.1-3:** Require that any proposed development be design to enhance and be compatible with adjacent development.
            - **Program:** Design Guidelines include standards for industrial projects which are in the vicinity of residential uses.
- **Goal 17:** Preservation and restoration of cultural resources, neighborhoods, and landmarks which have historical and/or cultural significance.
    - **Objective 17-1:** To ensure that the Community's historically significant resources are protected, preserved, and/or enhanced.
        - **Policy 17-1.1:** Encourage the preservation, maintenance, enhancement, and reuse of existing buildings and the restoration of original facades.
            - **Program:** Adherence to the City's historic properties preservation ordinances and City's Cultural Heritage Board requirements for preservation and design; implementation of design standards.

The design policies and standards established in Chapter V, *Urban Design*, of the Central City North Community Plan shall be followed to ensure that residential, commercial, and industrial projects and public spaces and rights-of-way incorporate specific elements of good design.

Central City Community Plan (update underway)

The approximately 2,161-acre Central City Community Plan Area (CPA) is located south of Sunset Boulevard/Cesar Chavez Avenue, north of the Santa Monica Freeway (Interstate 10), east of the Harbor Freeway (Interstate 110) and west of Alameda Street.[9] It is bordered by the communities of Central City North, Silver Lake-Echo Park, Westlake, Southeast and South Central Los Angeles. The Community Plan establishes the following goals, objectives, policies, and programs relevant to aesthetics:

- **Objective 4-1:** To encourage the expansion and additions of open spaces as opportunities arise.
    - **4-1.1:** Review existing open space standards in order to expand the range of potential open space resources at the neighborhood and community levels.
        - **Program:** Create or maintain public open space to serve as focal point in each of Downtown's neighborhoods and districts.

- **Objective 4-4:** To encourage traditional and non-traditional sources of open space by recognizing and capitalizing on linkages with transit, parking, historic resources, cultural facilities, and social services programs.
    - **4-4.1:** Improve Downtown's pedestrian environment in recognition of its important role in the efficiency of Downtown's transportation and circulation systems and in the quality of life for its residents, workers, and visitors.
        - **Program:** Develop and adopt "non-standard" alternatives to City requirements related to placement of street lights, street trees, sidewalk and other paving material, street furniture, bus shelters, and other features that enhance the pedestrian environment as their primary standard.

          Program: Develop a coordinated team approach to assist property owners and assessment districts develop ongoing activities for necessary care of pedestrian/open space projects.

- **Objective 10-1:** To ensure that the arts, culture, and architecturally significant buildings remain central to the further development of downtown and that it remains clearly discernable and accessible to all citizens in and visitors to Los Angeles.

[9] City of Los Angeles Department of City Planning. Accessed 17 February 2017. *Central City Community Plan*. A part of the Land Use Element of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/pdf/CCYCPTXT.PDF

Conservation Element of the General Plan

The Conservation Element of the City's General Plan has established the following objectives and policies towards the protection of scenic vistas, which are the panoramic public view access (from park lands, private and publicly owned sites, and public rights-of-way) to natural features, striking or unusual natural terrain, or unique urban or historic features:[10]

- **Objective:** protect and reinforce natural and scenic vistas as irreplaceable resources and for the aesthetic enjoyment of present and future generations.
  - **Policy:** continue to encourage and/or require property owners to develop their properties in a manner that will, to the greatest extent practical, retain significant existing land forms and unique scenic features and/or make possible public view or other access to unique features or scenic views.
    - **Program 1:** permit processing, enforcement and periodic revision, especially environmental review, grading, large lot zoning, clustering of structures, building height limits and other project design and construction methods for protecting natural terrain and features and protecting public view access
    - **Program 2:** planning and construction of roads, utilities and other public projects, especially projects that are within or impact natural terrain and/or scenic areas.

Mobility Element of the General Plan

The Mobility Element of the City's General Plan has established the following objectives, policies, guidelines, and/or regulations towards the protection of scenic highways, including height limits and building setback requirements:[11]

- **Goal C:** An integrated system of pedestrian priority segments, bikeways and scenic highways which strengthens the City's image while also providing access to employment opportunities, essential services, and open space.
  - **Objective 11**: Preserve and enhance access to scenic resources and regional open space.
    - **Policy 11.1:** Designate scenic highways and scenic byways which merit special consideration for protection and enhancement of scenic resources.

[10] City of Los Angeles Department of City Planning. 2001. *Conservation Element of the City of Los Angeles General Plan.* Available online at: http://cityplanning.lacity.org/cwd/gnlpln/consvelt.pdf Page II-48.

[11] City of Los Angeles Department of City Planning. May 28, 2015. *Mobility Plan 2035: An Element of the General Plan.* Available online at: http://planning.lacity.org/documents/policy/mobilityplnmemo.pdf

- **Policy 11.2:** Provide for protection and enhancement of views of scenic resources along or visible from designated scenic highways through implementation of guidelines set forth in this Transportation Element (Chapter VI.D).
- **Policy 11.3:** Consider aesthetics and scenic preservation in the design and maintenance of designated scenic highways and of those scenic byways designated in Community Plans.
- **Policy 11.4:** Establish Scenic Corridor Plans, where appropriate, which set forth corridor boundaries and development controls in harmony with each corridor's specific scenic character.

The Mobility Element of the General Plan establishes the following objective and policy relevant to scenic highways:

- **Objective 2:** World Class Infrastructure
  - **Policy 2.16:** Scenic Highways
    - Ensure that future modifications to any scenic highway do not impact the unique identity or characteristic of that scenic highway.
    - Scenic highways include many of the City's iconic streets. Preservation and enhancement of these streets and their scenic resources need to be preserved per the Scenic Highways Guidelines in Appendix B of this Plan.

Appendix B, *Inventory of Designated Scenic Highways and Guidelines*, of the Mobility Element provides scenic highways guidelines, scenic byways guidelines, selection criteria for scenic highways and byways, and an inventory of designated scenic highways.

3.1.2 Affected Environment/Existing Conditions

The project site includes a portion of the west façade of the historic Los Angeles Union Station terminal, a sidewalk and paved fire access road along the west façade, 70 iconic palm trees,[12] landscaped planters flanking the north and south pedestrian paths and a historic entry plaza with sundial leading to the main entrance of the historic Los Angeles Union Station terminal, a sidewalk along the parking lot and eastern façade of the La Petite Academy/First 5 LA building, and a paved parking lot at Los Angeles Union Station. The east side of the Alameda Street right-of-way (ROW) within the project site is characterized by a sidewalk with a bus stop near the north pedestrian path to the Los Angeles Union Station main entrance and no existing street trees. The west side of the Alameda Street ROW within the project site is characterized by a sidewalk with 15 existing street trees to the north of Los Angeles Street and no street

[12] Although the palm trees are not historic character-defining features, they comprise a prominent part of the existing viewshed.

trees to the south of Los Angeles Street. The north side of the Los Angeles Street ROW within the project site is characterized by two street trees, a bicycle lane, and a parking area next to the bollards along Los Angeles Plaza Park, also known as the Plaza at El Pueblo de Los Angeles Historical Monument. The south side of the Los Angeles Street ROW within the project site is characterized by a sidewalk with no street trees. The portion of Los Angeles Street within the project site contains landscaping with 10 ornamental trees within the street median. The portion of the project site along Arcadia street is characterized by a paved traffic lane.

Surrounding the project site are Mozaic Apartments and the northern crosswalk at Cesar Chavez Avenue to the north; the historic Los Angeles Union Station terminal, the Metropolitan Water District of Southern California (MWD) Headquarters Building, La Petite Academy/First 5 Los Angeles, and the Hollywood Freeway to the southeast; and Spring Street, Los Angeles Plaza Park, Father Serra Park, and two I-101 freeway entrance ramps to the west. The Metro Gold Line Rail and Regional Rail lines run north-south approximately 0.1 mile east of the project site. The area around the project site is generally characterized by mid-rise multi-family residential and commercial uses in the Chinatown District and El Pueblo de Los Angeles Historic Monument to the northwest of the project site; a mix of low-rise industrial and residential uses to the north; institutional and a few commercial uses to the east; a mix of low-rise industrial and commercial uses to the southeast; industrial and institutional uses to the south; a mix of commercial uses and multi-family residential uses in Little Tokyo and civic/institutional uses, then the Historic Core and Financial District to the southwest; and public parks and performing areas centers at Bunker Hill to the west. Beyond the Los Angeles Union Station terminal to the east is the East Portal and MTA Gateway building which include a significant number of integrated public artworks commissioned by Metro, Vignes Street, and C. Erwin Piper Technology Center (Piper Tech), which has a helicopter landing on the roof. The Los Angeles River is located approximately 0.5 mile east of the project site, and the Hollywood Freeway (SR-101) near the southern edge of the project site. Open spaces in the area include the paved Los Angeles River channel (not green space) and multiple small green spaces to the west and southwest, including Los Angeles Plaza Park, City Hall Park, and Grand Park. To the south of SR-101 are vacant lots that serve as construction staging yards and small unauthorized temporary encampments near the gated industrial uses.

Scenic Vistas

State: Caltrans has designated one scenic vista within Los Angeles County, Lamont Odett Vista Point, which is located at Post Mile 57.8 along the northbound side of State Route 14 and overlooks the Aerospace Valley, Lake Palmdale, and the California Aqueduct toward the north and northeast from the

Vista Point.[13,14] This vista point is located over 33 miles north of the project site, on the opposite side of the San Gabriel Mountains. The project site is not visible from this vista point due to distance, an intended directional vista toward the north, and intervening topography.

County: There are no officially designated County of Los Angeles scenic vistas in the project vicinity identified in the Los Angeles County General Plan 2035.[15] The County is considering the adoption of a Scenic Resources Ordinance in the 2017 to 2018 timeframe that may include scenic vista points.[16] The nearest designated public viewing area from the Los Angeles County Santa Monica Mountains Local Coastal Program is located in Lower Topanga Canyon, approximately 20 miles west of the project site; the project site is not visible from this location due to distance, intervening topography, vegetation, and development.

City: Section 15: Land Form and Scenic Vistas of the Conservation Element of the City of Los Angeles General Plan defines scenic views or vistas as "the panoramic public view access to natural features, including views of the ocean, striking or unusual natural terrain, or unique urban or historic features. Public access to these views is from park lands, private and publicly owned sites and public rights-of-way."[17] The project site is located approximately 14 miles away from the ocean. The terrain of the project site is no longer natural, as it has been completely developed with streets, parking lots, and a few landscaped areas located within the street medians and parking/loading areas. To the north of the project site, hills within Elysian Park surrounding Dodger Stadium (0.8 miles away), hills within the community of Lincoln Heights (1.7 miles away), and hills within the community of Monterey Park (2 miles away) provide a topographic backdrop in the foreground; and the towering San Gabriel Mountains (11 miles north of the project site) provide a topographic backdrop in the background of views from the project site. Natural topographic features such as the Santa Monica Mountains to the west and northwest, Verdugo Mountains to the north, and San Raphael Hills to the north-northeast are not visible from ground level at the project site due to the proximity of hilly terrain (much of which is developed)

[13] Male, Laura, Sapphos Environmental, Inc. Pasadena, CA. 3 July 2015. Communication with Daniel Kitowski, Transportation Manager (GIS), California Department of Transportation.

[14] California Department of Transportation. 2014. *2014 Named Freeways, Highways, Structures and Other Appurtenances in California.* Available at: http://www.dot.ca.gov/hq/tsip/hseb/products/Named_Freeways_Final.pdf

[15] The County of Los Angeles has designated scenic vistas in the Santa Monica Mountains land use plans, which are located more than 15 miles south of the Trail Planning Study Area. As the study area is not located in the vicinity of these scenic vistas, they have not been included in the analysis. Santa Monica Mountains Local Coastal Program map with public viewing areas available at: http://planning.lacounty.gov/assets/upl/project/coastal_adopted-map3.pdf

[16] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. *County of Los Angeles General Plan – Chapter 16: General Plan Implementation Programs.* Program, C/NR-6. Available at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch16.pdf

[17] City of Los Angeles Department of City Planning. 2001. *Conservation Element of the City of Los Angeles General Plan.* Available online at: http://cityplanning.lacity.org/cwd/gnlpln/consvelt.pdf Page II-48.

within 2 miles to the northwest, north, and east of the project site. Unique urban features within 0.5 mile of the project site include the Los Angeles River, an approximately 50-mile channel that was constructed for flood control purposes in the late 1930s to 1940s, extending from the Simi Hills to Long Beach around an alluvial river that once ran freely across a flood plain in the Los Angeles basin.

Unique historic features within 0.5 mile of the project site that are located in the Central City North Community Plan Area (CPA) include (Figure 3.1.2-1, *Unique Urban and Historic Features Near Project Site*):[18]

- Los Angeles Union Station Passenger Terminal and Grounds[19]
- River Station Area (San Pedro Railroad)[20]
- United States Post Office – Terminal Annex
- Chinatown Gates (East and West)
- Macy Street Viaduct (also called Cesar E. Chavez Avenue Viaduct)
- First Street Bridge
- Historic industrial and manufacturing sites

[18] City of Los Angeles Department of City Planning, Office of Historic Resources. Accessed 21 April 2016. *HistoricPlacesLA: Los Angeles Historic Resources Inventory.* Available at: http://www.historicplacesla.org/map

[19] Also identified in General Plan Land Use Map as of February 25, 2014 of Central City North Community Plan – City of Los Angeles Department of City Planning. February 25, 2014. *General Plan Land Use Map: Central City North Community Plan.* Available at: http://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

[20] Also identified in General Plan Land Use Map as of February 25, 2014 of Central City North Community Plan – City of Los Angeles Department of City Planning. February 25, 2014. *General Plan Land Use Map: Central City North Community Plan.* Available at: http://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

Unique historic features within 0.5 mile of the project site that are located in the Central City CPA include (Figure 3.1.2-1):[21]

- Los Angeles Plaza Park, including Plaza Substation[22]
- Plaza Church[23]
- Saint Vibiana's Cathedral[24] (no longer a recognized cathedral)
- First Cemetery of Los Angeles
- U.S. Court House and Post Office
- Los Angeles City Hall
- Higgins Building
- Little Tokyo Historic District, including:
    - Japanese Union Church of Los Angeles
    - San Pedro Firm Building
    - Aoyama Tree
    - Los Angeles Hompa Hongwanji Buddhist Temple

The historic Los Angeles Department of Water and Power General Office Building (John Ferraro Building) is located approximately 0.5 mile west of the project site.

[21] City of Los Angeles Department of City Planning, Office of Historic Resources. Accessed 17 February 2017. *HistoricPlacesLA: Los Angeles Historic Resources Inventory.* Available at: http://www.historicplacesla.org/map

[22] Also identified in General Plan Land Use Map as of July 7, 2009 of Central City Community Plan – City of Los Angeles Department of City Planning. July 7, 2009. *General Plan Land Use Map: Central City Community Plan*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

[23] Also identified in General Plan Land Use Map as of July 7, 2009 of Central City Community Plan – City of Los Angeles Department of City Planning. July 7, 2009. *General Plan Land Use Map: Central City Community Plan*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

[24] Also identified in General Plan Land Use Map as of July 7, 2009 of Central City Community Plan – City of Los Angeles Department of City Planning. July 7, 2009. *General Plan Land Use Map: Central City Community Plan*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

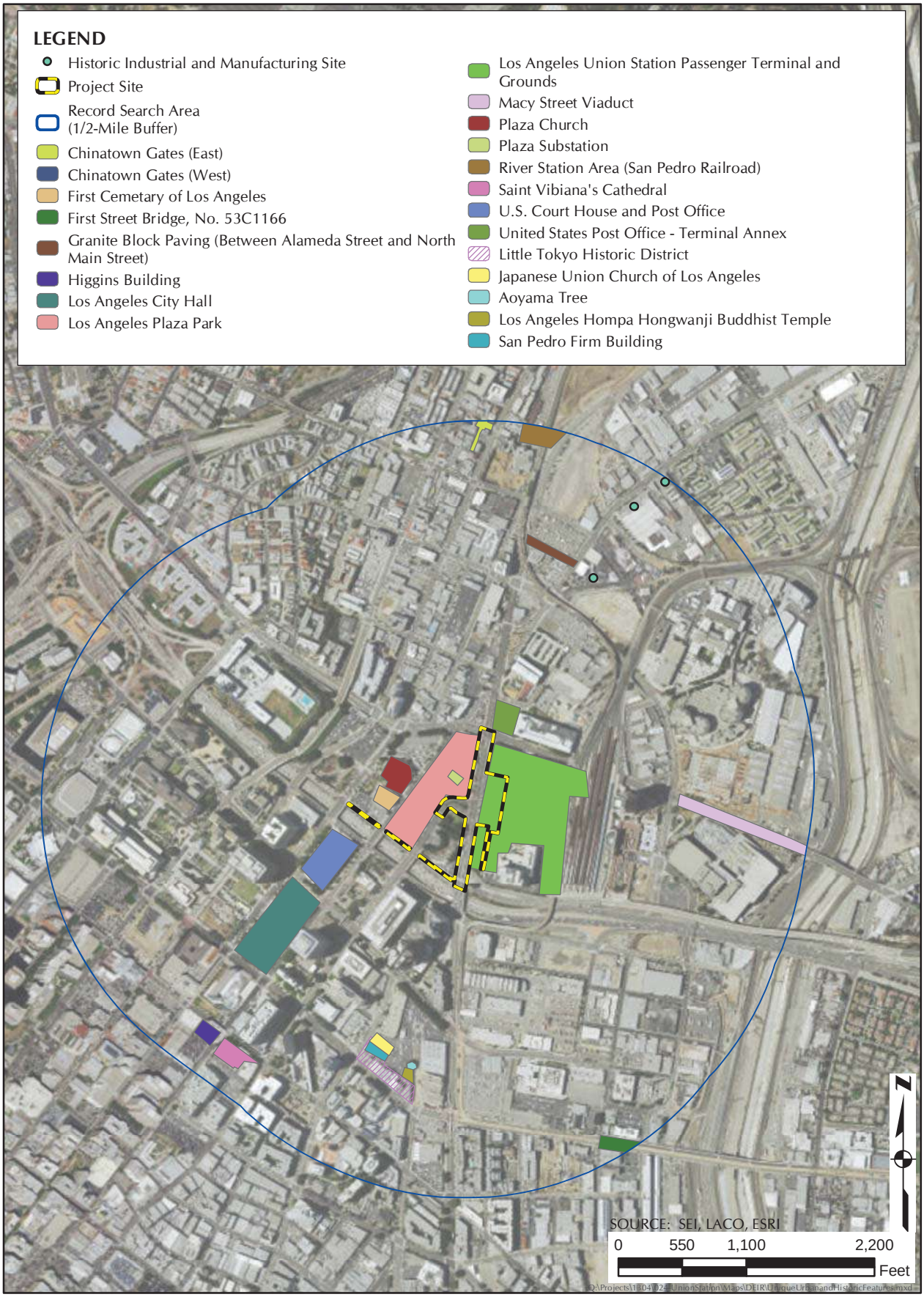


Figure 3.1.2-1. Unique Urban & Historic Features Near Project Site

Scenic Resources within State Scenic Highway Corridors

There are no officially designated or eligible state scenic highways on or adjacent to the project site. According to the California Scenic Highway Program, the nearest officially designated scenic highway is 55.1 miles of State Route 2 (Angeles Crest Highway),[25] located approximately 12 miles to the north of the project site (Figure 3.1.2-2, *State Scenic Highways*). The nearest state-designated historic parkway is 6 miles of State Route 110 (Arroyo Seco Historic Parkway),[26] located approximately 1.3 miles north of the project site. The Central City Community Plan and Central City North Community Plan also designate State Route 110 as a scenic freeway.[27,28] The nearest eligible state scenic highway is Interstate Route 210 (Foothill Freeway), which is located approximately 7 miles north of the project site at the nearest point.[29] The nearest designated County scenic highway is Malibu Canyon–Las Virgines Road from Route 1 to Los Hills Road, located approximately 27 miles west of the project site at the nearest point. The area around the project site, inclusive of the 498-foot-tall Metropolitan Transportation Authority (MTA) Union Station Gateway Building, cannot be viewed from officially designated or eligible state scenic highways, historic parkways, or County scenic highways, due to distance, intervening topography, and the built environment.

Existing Visual Character or Quality

Site reconnaissance was conducted on April 22, 2016 and February 9, 2017, to characterize the baseline conditions at the project site and within a 0.5-mile study area radius. Reconnaissance was conducted on foot, with photographs taken from elevated locations at the observation deck on the 27th floor of Los Angeles City Hall and the third-floor balcony of the existing MTA Union Station Gateway Building (Figure 3.1.2-3, *Project Study Area Photographs*). Before and after site reconnaissance, a review of aerial imagery and street level views from Google Earth, City General Plan land use designations, and City zoning designations was conducted to support the observations during site reconnaissance. The landscape of the project site is dominated by a designated historic building (Los Angeles Union Station) and rows of palm trees.

[25] California Department of Transportation. Accessed 17 February 2017. *Officially Designated State Scenic Highways.* Available at: http://www.dot.ca.gov/design/lap/livability/scenic-highways/index.html

[26] California Department of Transportation. Accessed 17 February 2017. *Route 110 – Historic Parkway*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm

[27] City of Los Angeles Department of City Planning. *General Plan Land Use Map: Central City Community Plan.* 7 July 2009. Available at: https://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

[28] City of Los Angeles Department of City Planning. *General Plan Land Use Map: Central City North Community Plan.* 25 February 2014. Available at: https://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

[29] California Department of Transportation. Accessed 17 February 2017. *List of Eligible (E) and Officially Designated (OD) Routes*. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/scenic_hwy.htm

The Los Angeles Union Station site holds visual prominence over the rest of the project site. The project site includes a portion of the west façade of the historic Los Angeles Union Station terminal (with a 135-foot-high clock tower), a brick sidewalk and asphalt paved fire access road along the west façade including 22 of 32 tall paired palm trees in planters that parallel the west façade, eight parallel rows of six palm trees in landscaped planters flanking the north and south concrete pedestrian paths and a brick/stone paver historic entry plaza with a stone sundial leading to the main entrance of the historic Los Angeles Union Station terminal, a concrete sidewalk along the parking lot and eastern façade of the La Petite Academy/First 5 LA building containing seven individual ornamental southern magnolia trees in tree wells, and an asphalt paved parking lot containing four ornamental deciduous shade trees at Los Angeles Union Station. Ten of the paired palm trees (five pairs) located directly in front of the historic Los Angeles Union Station terminal building were planted in 1939 as part of the original design; the remaining 22 paired palm trees that parallel the west façade of the Los Angeles Union Station terminal building, as well as the eight parallel rows of six palm trees, were installed in the mid to late 1990s and are not historic or character-defining features.[30] The later palms hinder the viewshed of the west façade of Union Station and have not taken on their own significance.

Alameda Street is a wide six-lane plus turn lane asphalt-paved road within the project site that is scaled for vehicles. The east side of the Alameda Street ROW within the project site is characterized by a 10- to 15-foot-wide concrete sidewalk with a bus stop near the north concrete pedestrian path to the Los Angeles Union Station main entrance and no existing street trees. The west side of the Alameda Street ROW within the project site is characterized by a 8- to 25-foot-wide concrete sidewalk, with eight palm trees alternating with seven flowering ornamental trees within tree wells to the north of Los Angeles Street and no street trees to the south of Los Angeles Street. The crosswalks on Alameda Street within the project site are decorative crosswalks illustrating a brick pattern instead of standard continental crosswalks.

[30] Grace, Michael L. 5 May 2014. *75th Anniversary of Los Angeles Union Station.* Available at: http://cruiselinehistory.com/75th-anniversary-of-los-angeles-union-station-in-the-1950s-kim-novak-arrived-aboard-the-southern-pacifics-golden-state-alan-ladd-and-virginia-leith-travelled-aboard-the-santa-fes-su/

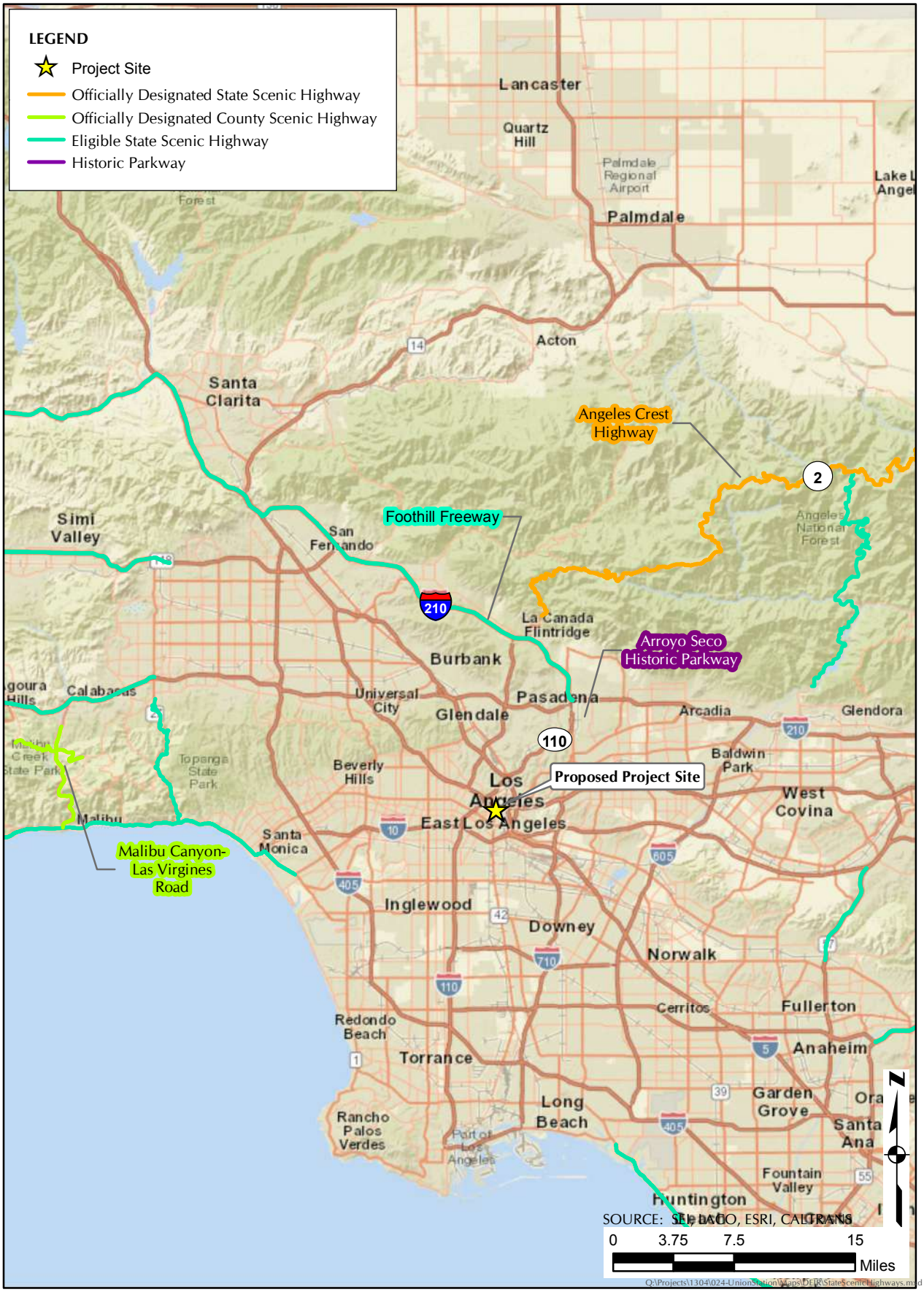


Figure 3.1.2-2. State Scenic Highways

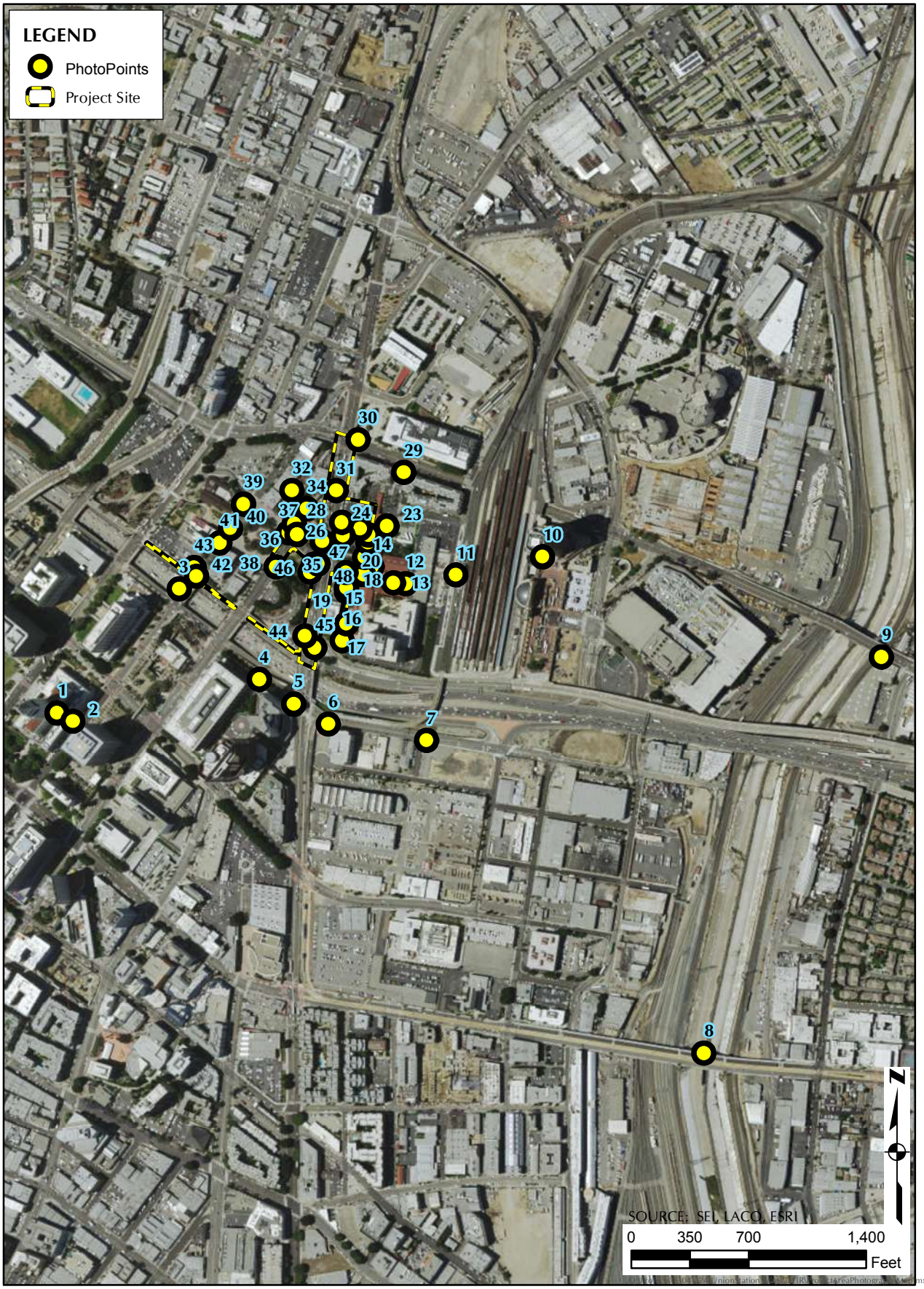


Figure 3.1.2-3a. Project Study Area Photographs

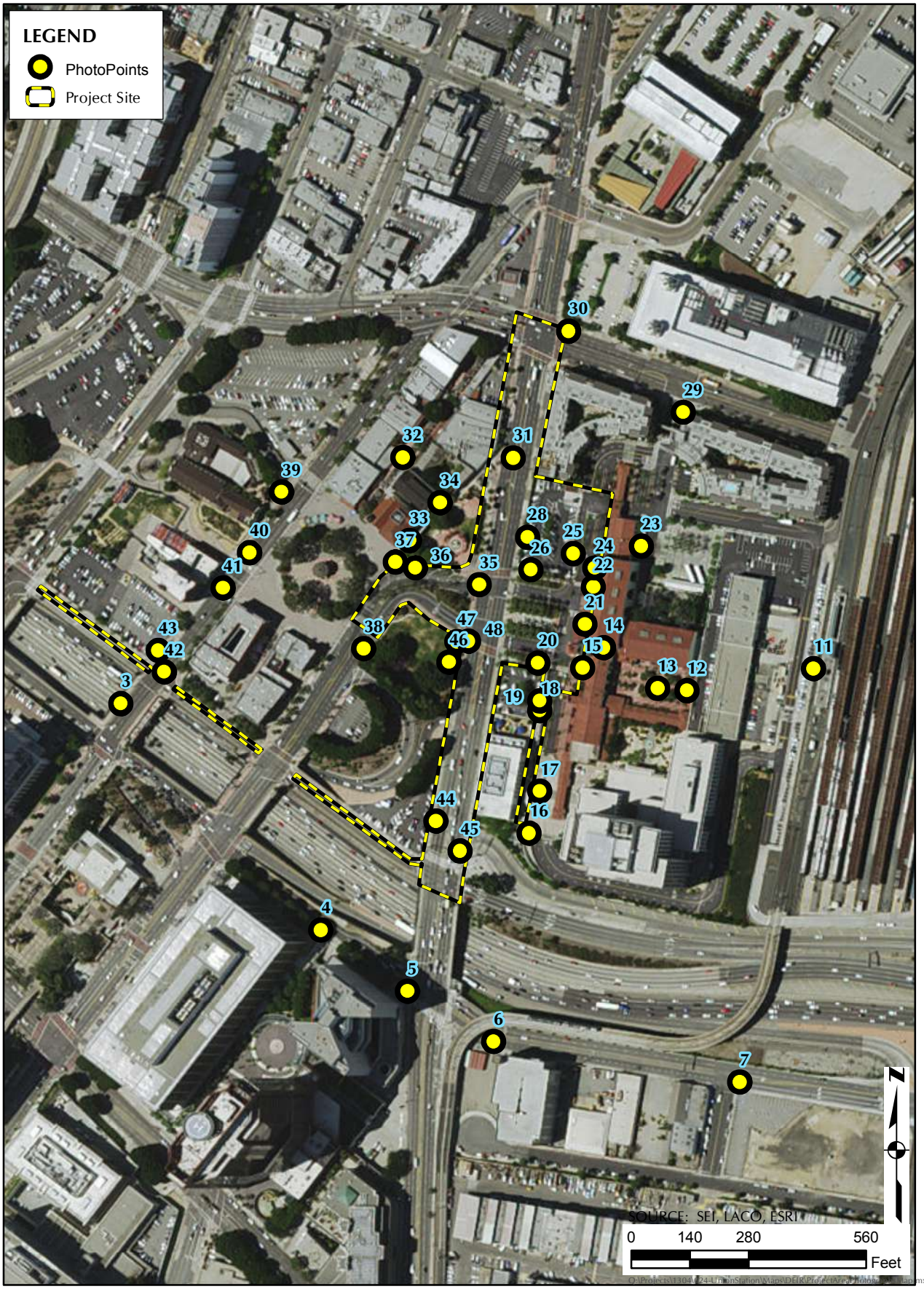


Figure 3.1.2-3b. Project Study Area Photographs

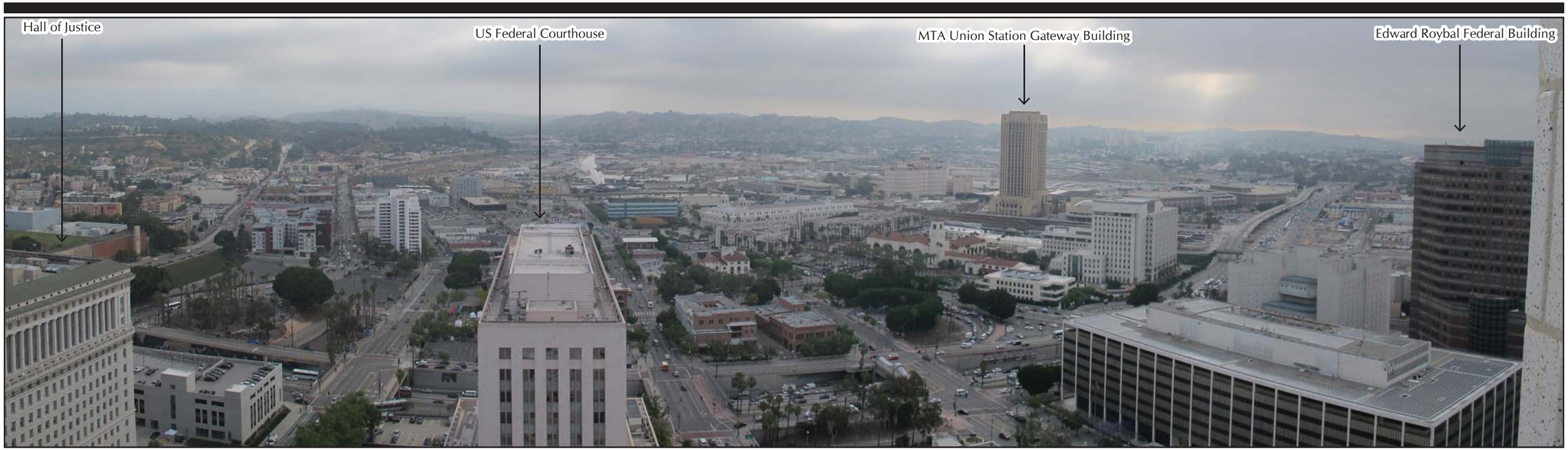


PHOTO 1. Northeastern Side of Los Angeles City Hall Observation Deck in April 2016 - 27th Floor - Facing Northeast

PHOTO 2. Southeastern Side of Los Angeles City Hall Observation Deck in April 2016 - 27th Floor - Facing East

Figure 3.1.2-3c. Project Study Area Photographs

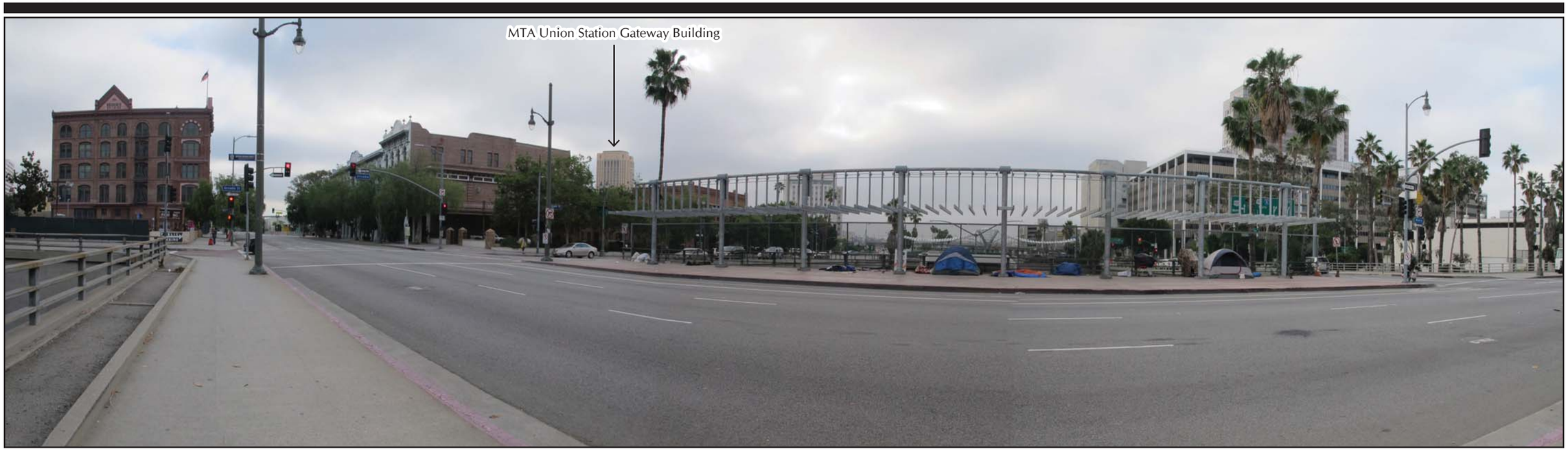


PHOTO 3. N Main Street and Santa Ana Freeway in April 2016 - Facing East

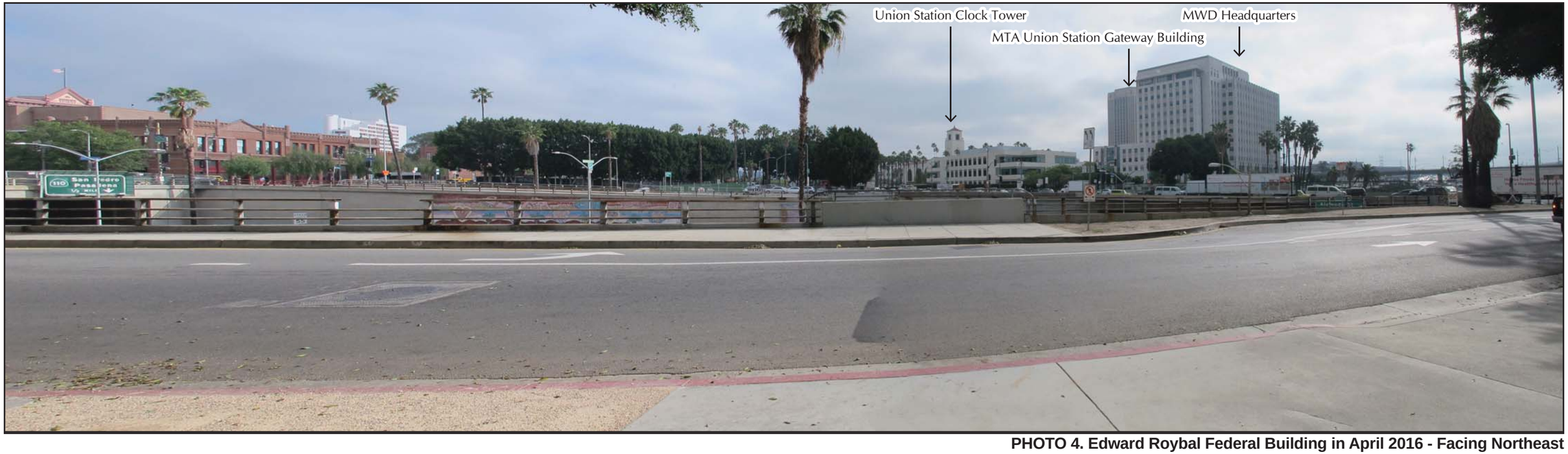


PHOTO 4. Edward Roybal Federal Building in April 2016 - Facing Northeast

Figure 3.1.2-3c. Project Study Area Photographs

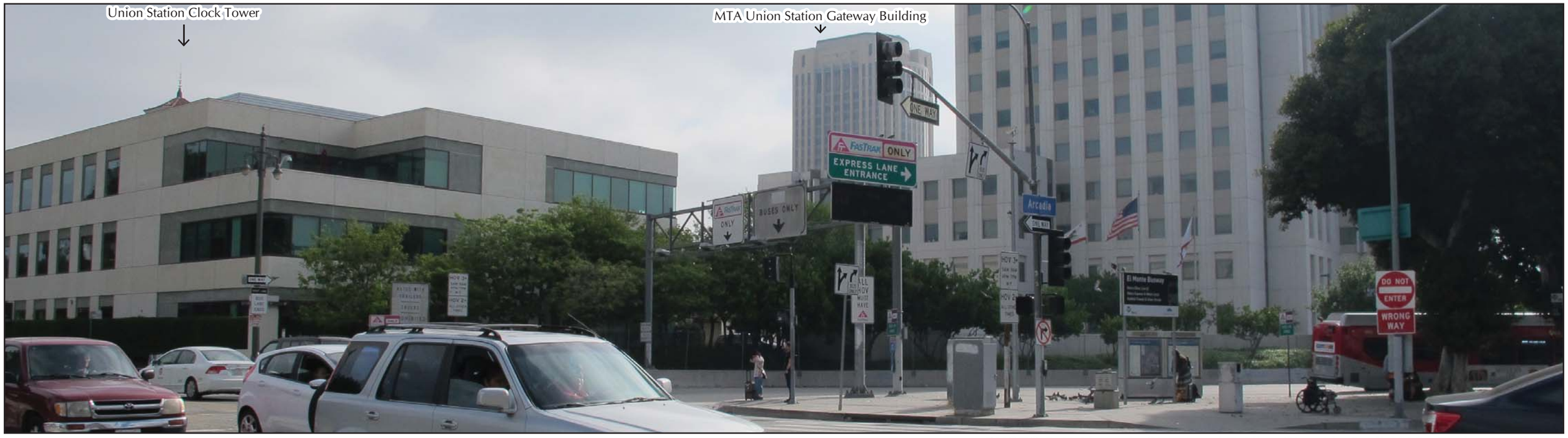


PHOTO 5. N Alameda Street and E Aliso Street in April 2016 - Facing Northeast

PHOTO 6. E Commercial Street Near N Alameda Street in April 2016 - Facing North

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 7. E Commercial Street and N Hewitt Street in April 2016 - Facing North

PHOTO 8. E 1st Street Bridge Over Los Angeles River in April 2016 - Facing North

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 9. Historic Macy Street Viaduct on East Cesar E Chavez Avenue in April 2016 - Facing West

PHOTO 10. MTA Union Station Gateway Building at Union Station East in April 2016 – 3rd Floor Balcony – Facing Southwest

Figure 3.1.2-3c. Project Study Area Photographs

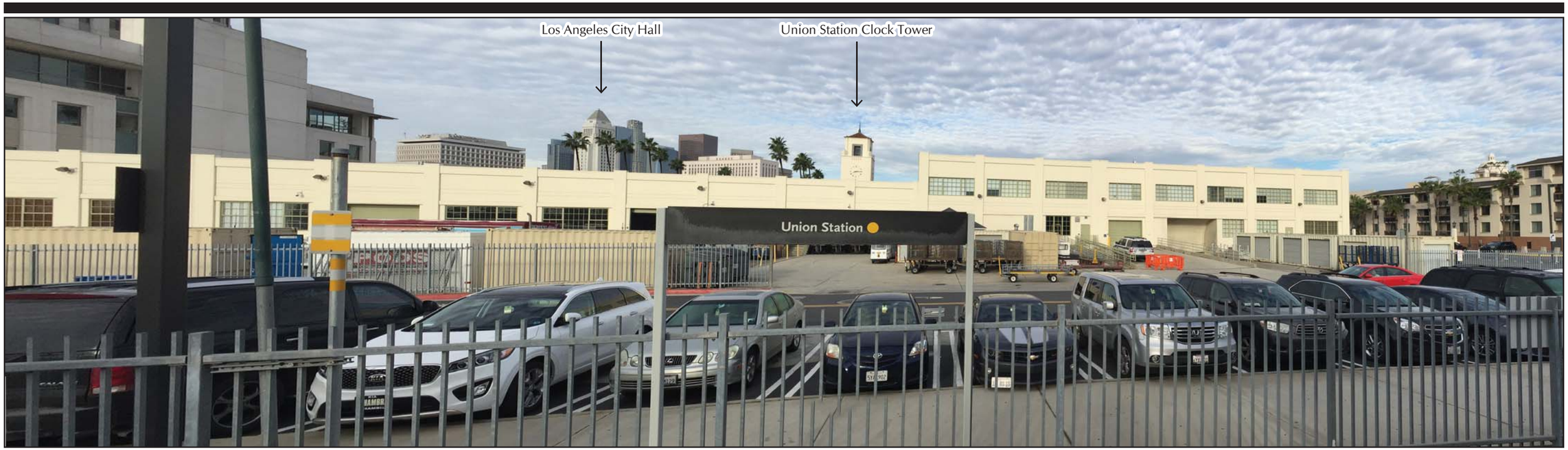


PHOTO 11. Union Station Clock Tower from Gold Line Station in February 2017 - Union Station - Facing West

PHOTO 12. South Courtyard at Union Station in April 2016 - Facing West

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 13. Union Station West Clock Tower from Courtyard in February 2017 - Facing West

Figure 3.1.2-3c. Project Study Area Photographs

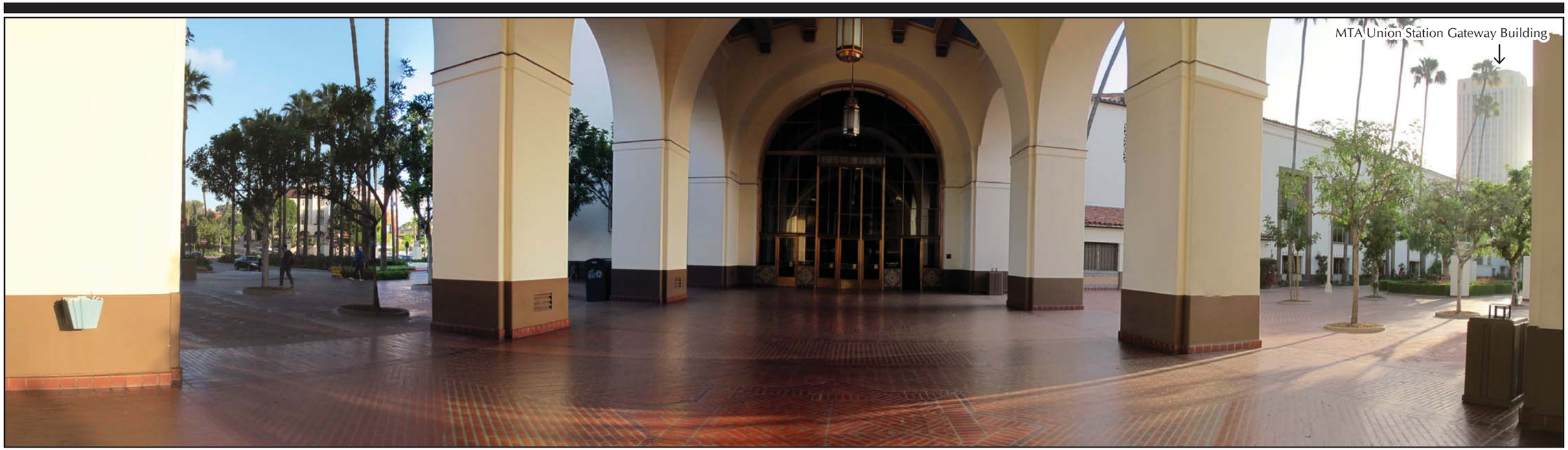


PHOTO 14. Union Station West in April 2016 - Facing Northeast

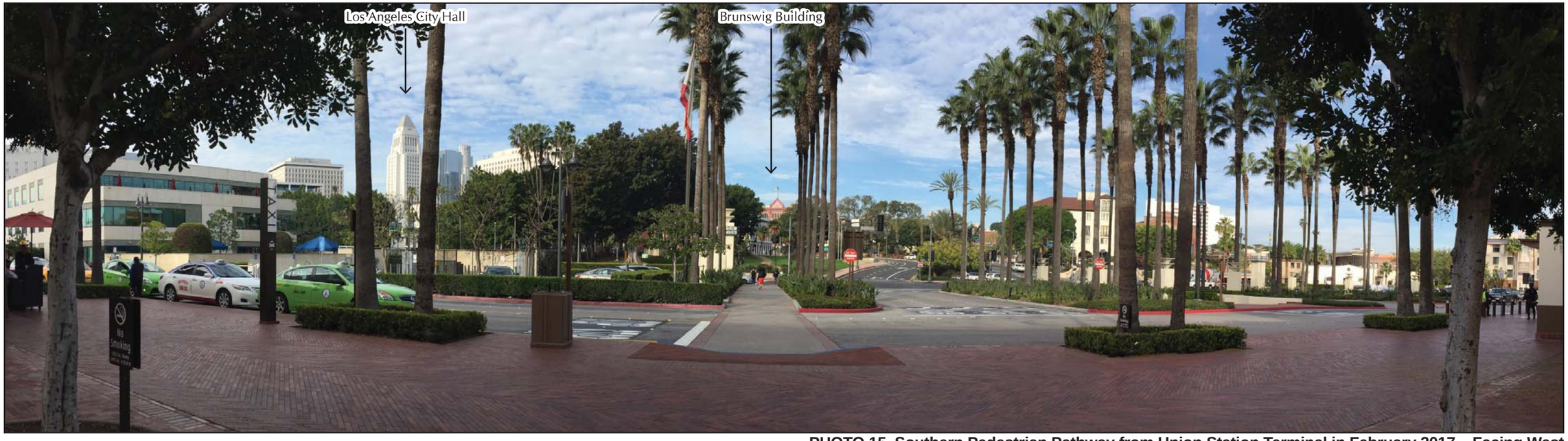


PHOTO 15. Southern Pedestrian Pathway from Union Station Terminal in February 2017 – Facing West

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 16. Sidewalk Adjacent to First 5 LA Building in February 2017 – Facing Northeast

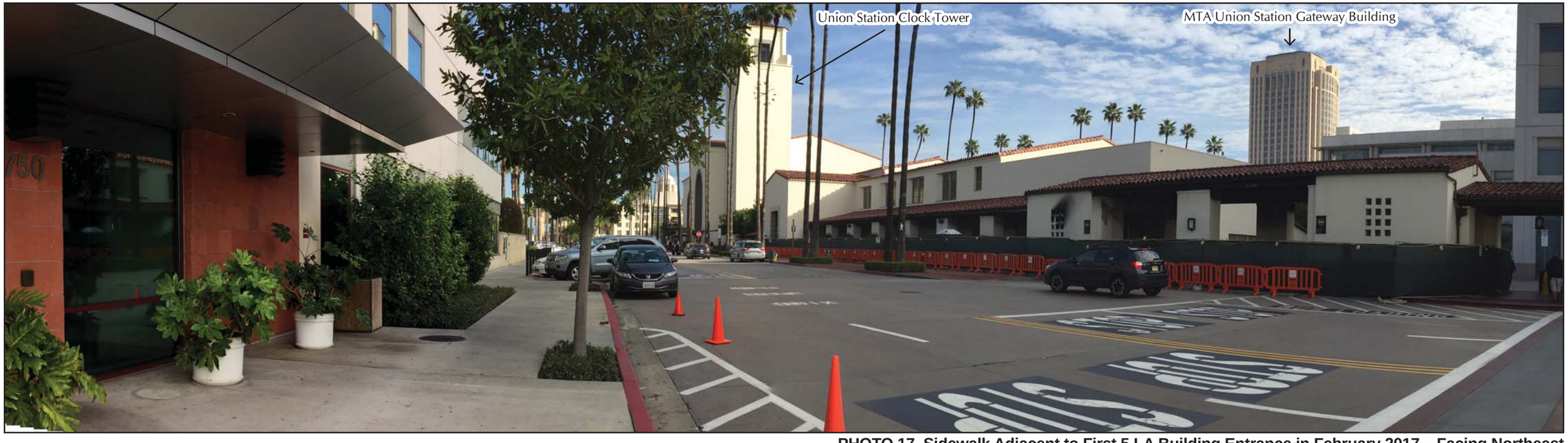


PHOTO 17. Sidewalk Adjacent to First 5 LA Building Entrance in February 2017 – Facing Northeast

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 18. First 5 LA Parking Lot and Building in February 2017 – Facing South

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 19. First 5 LA Parking Lot in February 2017 – Facing North

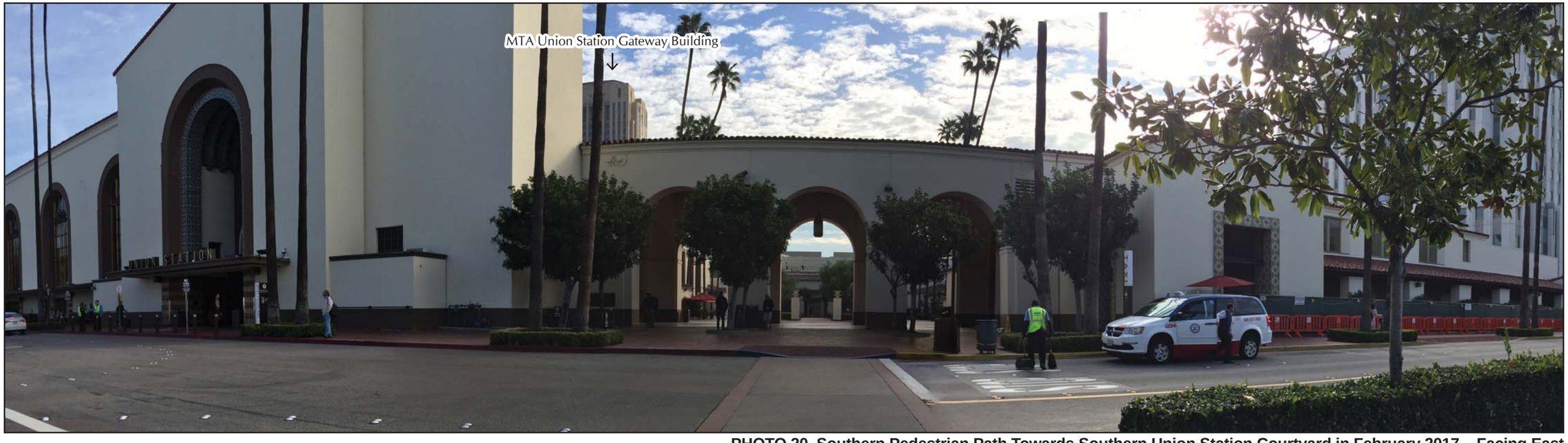


PHOTO 20. Southern Pedestrian Path Towards Southern Union Station Courtyard in February 2017 – Facing East

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 21. Historic Entry Plaza with Sundial from Main Entrance to Union Station Terminal in February 2017 – Facing Northwest

PHOTO 22. Northern Pedestrian Path and Existing Vehicular Exit to Union Station Site in February 2017 – Facing West

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 23. Vehicular Loading Zone and Existing Parking Lot for Union Station Terminal in February 2017 – Facing West

PHOTO 24. Existing Parking Lot for Union Station Terminal in February 2017 – Facing West

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 25. Existing Parking Lot for Union Station Terminal in February 2017 – Facing North

PHOTO 26. Northern Pedestrian Path, Existing Parking Lot, and Metro Bikeshare in February 2017 – Facing Northeast

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 27. Decorative Crosswalks at Los Angeles Street and Alameda Street in February 2017 – Facing West

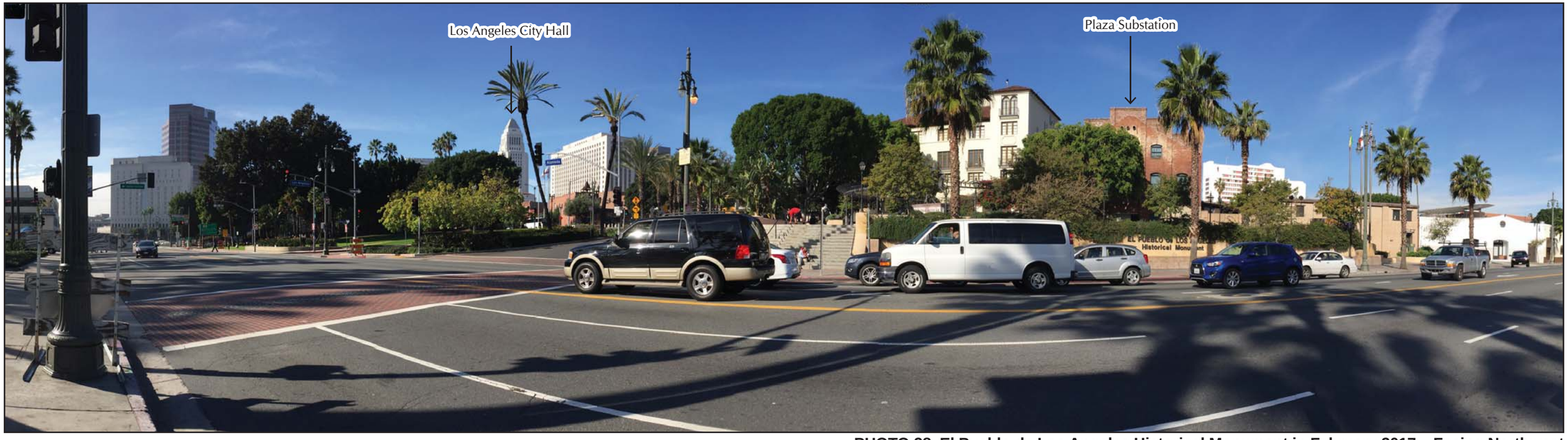


PHOTO 28. El Pueblo de Los Angeles Historical Monument in February 2017 – Facing Northwest

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 29. Decorative Crosswalk at Alameda Street and E Cesar Chavez Avenue in February 2017 – Facing Southwest

PHOTO 30. United States Post Office - Terminal Annex in April 2016 - Facing East

Figure 3.1.2-3c. Project Study Area Photographs

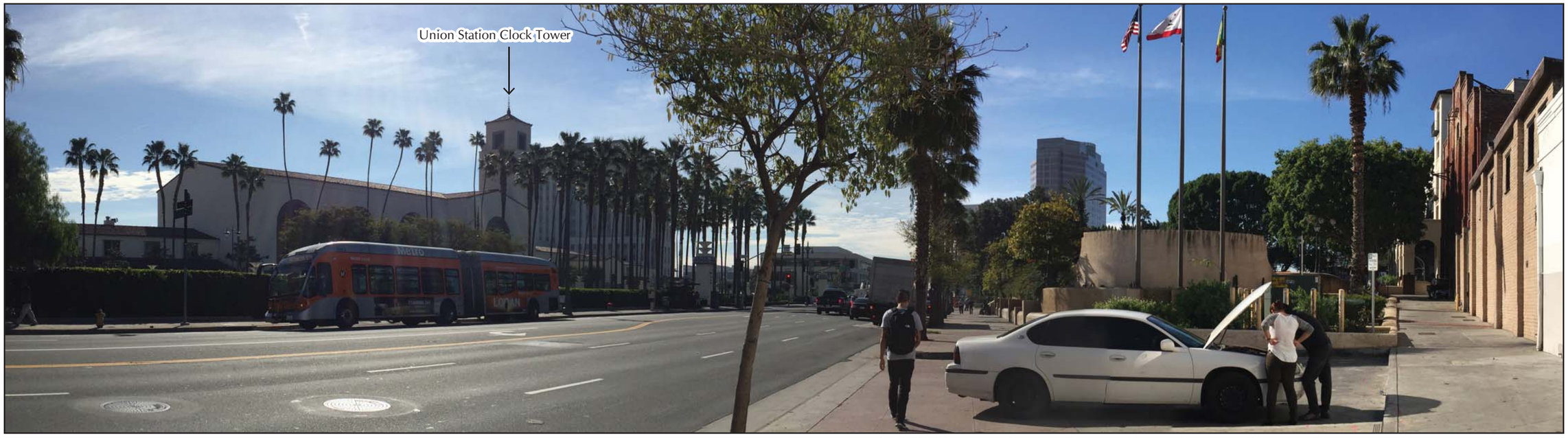


PHOTO 31. Union Station Terminal From Alameda Street in February 2017 – Facing Southeast

PHOTO 32. Los Angeles Plaza Park - Olvera Street in April 2016 - Facing East

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 33. Los Angeles Plaza Park - View from Plaza Substation in April 2016 - Facing East

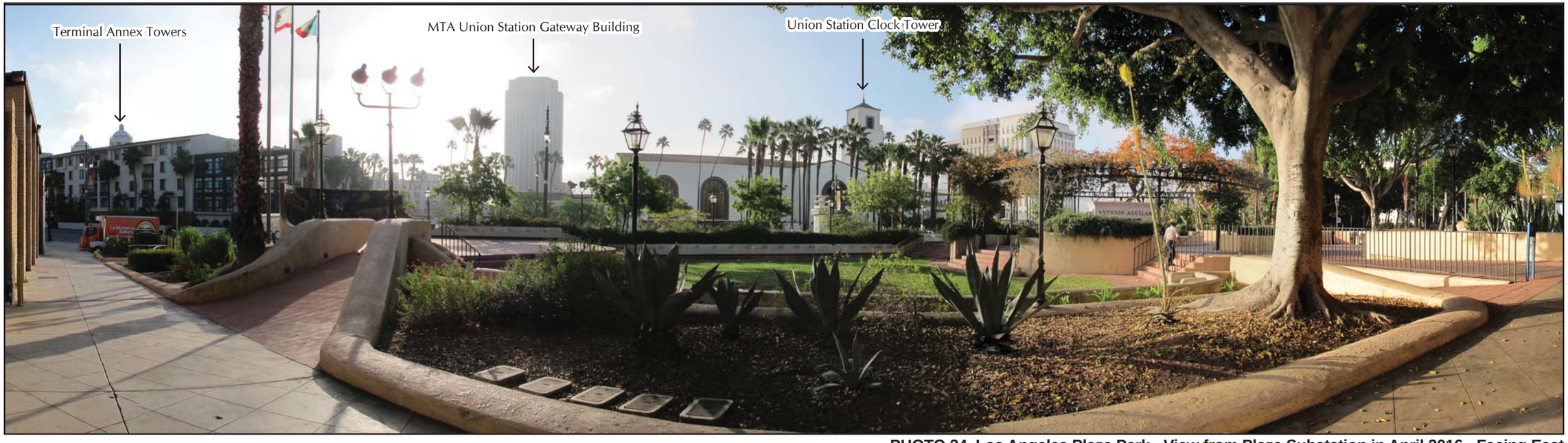


PHOTO 34. Los Angeles Plaza Park - View from Plaza Substation in April 2016 - Facing East

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 35. Decorative Crosswalks at Los Angeles Street and Alameda Street in February 2017 – Facing Southeast

PHOTO 36. Existing Palm Trees within Median on Los Angeles Street in February 2017 – Facing South

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 37a. Los Angeles Plaza Park in April 2016 - Facing East

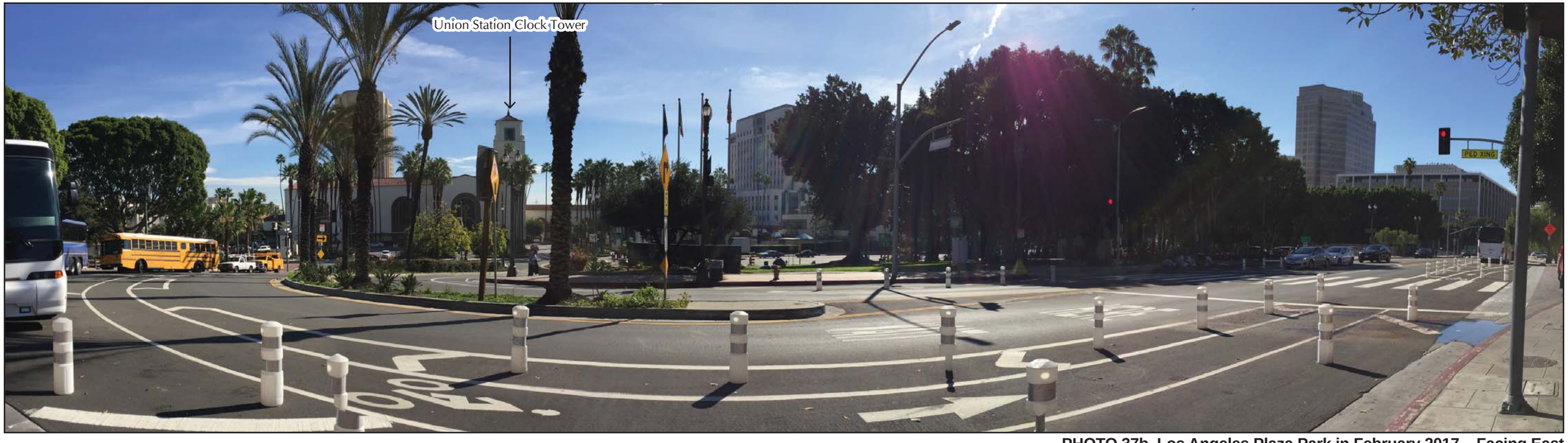


PHOTO 37b. Los Angeles Plaza Park in February 2017 – Facing East

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 38. Existing Bike Lanes on Los Angeles Street in February 2017 – Facing West

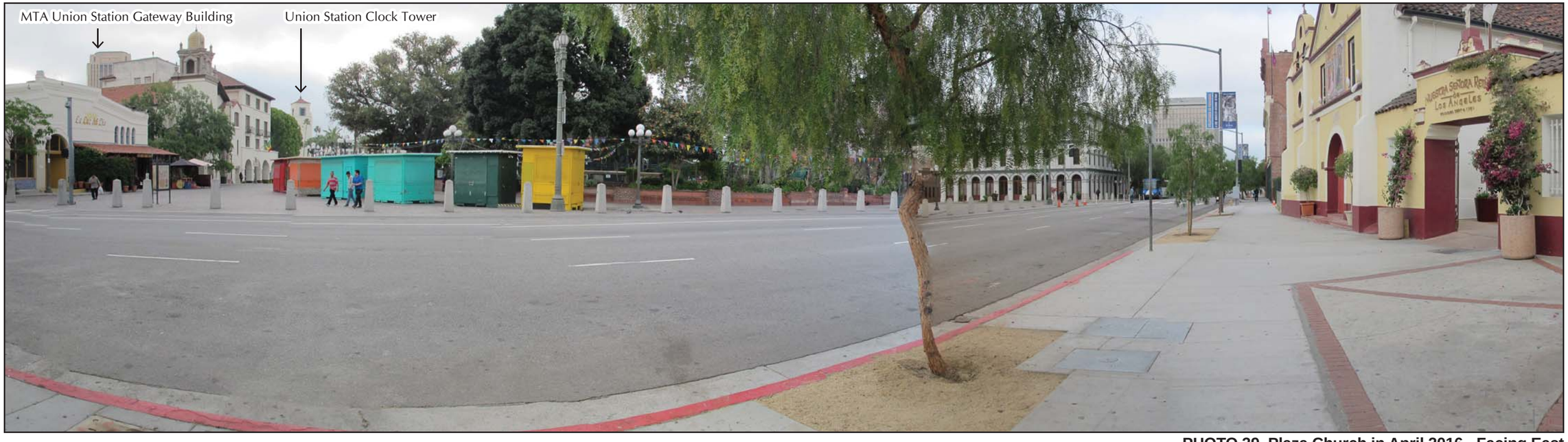


PHOTO 39. Plaza Church in April 2016 - Facing East

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 40. Historic La Iglesia de Nuestra Senora de Los Angeles Cemetery in April 2016 - Facing East

PHOTO 41. La Plaza de Culturas y Artes in April 2016 - Facing East

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 42. Temporary Encampments along Arcadia Street avBetween Spring Street and Main Street in February 2017 – Facing Northwest

PHOTO 43. Arcadia Street Between Main Street and Los Angeles Street in February 2017 – Facing Southeast

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 44. Alameda Street and Arcadia Street in February 2017 – Facing North

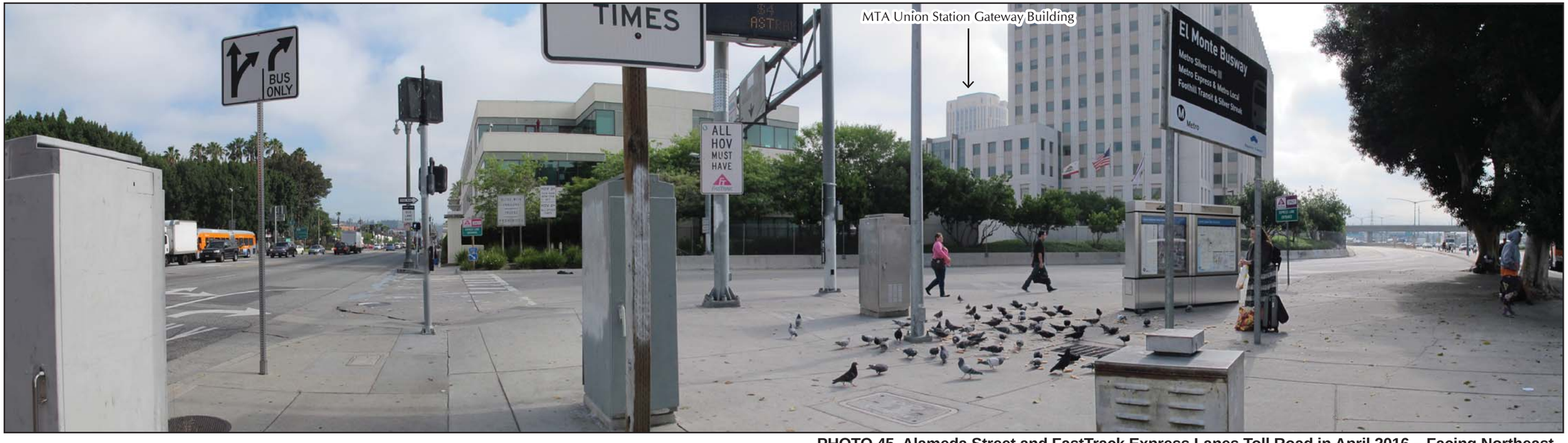


PHOTO 45. Alameda Street and FastTrack Express Lanes Toll Road in April 2016 – Facing Northeast

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 46. Father Serra Park from Alameda Street in February 2017 – Facing Northwest

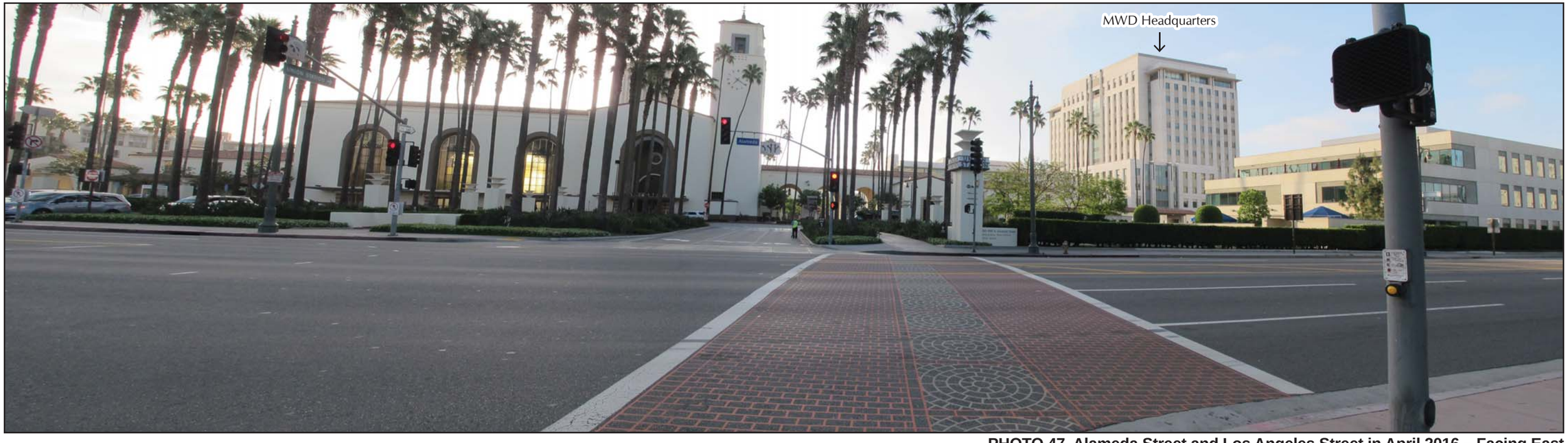


PHOTO 47. Alameda Street and Los Angeles Street in April 2016 – Facing East

Figure 3.1.2-3c. Project Study Area Photographs

PHOTO 48. Decorative Crosswalk at Los Angeles Street and Alameda Street in February 2017 – Facing North

Figure 3.1.2-3c. Project Study Area Photographs

Los Angeles Street is a four-lane asphalt-paved road with bike lane and a landscaped median within the project site that is scaled for vehicles and cyclists. The north side of the Los Angeles Street ROW within the project site is characterized by two palm trees in tree wells along a 10- to 16-foot-wide concrete sidewalk, and a bicycle lane and a large vehicle parking area striped over the asphalt paved road next to the bollards along Los Angeles Plaza Park (which is surfaced with pavers). The south side of the Los Angeles Street ROW within the project site is characterized by a 10-foot wide concrete sidewalk with no street trees adjacent to Father Serra Park (outside of the project site). The portion of Los Angeles Street within the project site contains a decorative pedestrian crosswalk illustrating a brick pattern, seven palm trees, and three flowering ornamental trees within the street median. The three-block portion of the project site along Arcadia Street is characterized by an asphalt paved traffic lane with white striping.

Visual Character of Land Uses: The area around the project site is generally characterized by mid-rise multi-family residential and commercial uses in the Chinatown District and El Pueblo de Los Angeles Historic Monument to the northwest of the project site; a mix of low-rise industrial and residential uses to the north; institutional (correctional facilities) and industrial uses to the east; the freeway and then a mix of low-rise industrial and commercial uses to the southeast; the freeway and then industrial and institutional uses to the south; the freeway and then a mix of commercial uses and multi-family residential uses in Little Tokyo and civic/institutional uses then the Historic Core and Financial District to the southwest; and public parks and performing areas centers at Bunker Hill to the west. Open spaces in the general area include the paved Los Angeles River channel (not green space) and multiple small green spaces to the west and southwest, including Los Angeles Plaza Park, City Hall Park, and Grand Park. To the south of SR-101 are vacant lots that serve as construction staging yards and small temporary encampments near the gated industrial uses. Beyond the vacant lots, the Arts District is rapidly changing, as apartment complexes and supporting commercial uses are opening. The Regional Connector Project is under construction at the edges of the Little Tokyo District and the Arts District, establishing a foundation for future pedestrian improvement and urban greening projects in the area. Similarly, Bunker Hill is expanding its arts and open space amenities, with an upcoming First and Broadway Park project near Grand Park and the Broad Museum.

Shadow-Sensitive Land Uses: Existing shadow-sensitive uses on or immediately adjacent to the project site include the two courtyards at Union Station West, the courtyard at Metropolitan Water District (MWD) Headquarters, Patsaouras Plaza at Union Station East, Los Angeles Plaza Park, and outdoor spaces designed to support the residents at Mozaic Apartments, which are routinely useable outdoor spaces associated with residential, recreational, or commercial uses.[31]

[31] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

Existing Sources of Light and Glare

Night Lights: Within Los Angeles County, the major sources of nighttime sky glow are cities, transportation corridors, and established communities. The project site is urban, with street lights installed on major roads and security lighting installed on most buildings in the area. Newer street lights such as on East Cesar E Chavez Avenue near the MTA Union Station Gateway Building are directed downward with bright LED lights; older street lights such as on Alameda Street and the historic 1st Street Bridge are not directed downward. The rail corridors are also lit along the Los Angeles River and at stations by downward-oriented light sources. Trains and motor vehicles are periodic sources of nighttime light on the roads and railways. According to *Earth at Night 2012* data, a composite of city light data acquired by the SuomiNPP satellite over 9 days in April 2012 and 13 days in October 2012, the project site is located within the middle of an approximately 3,500-square-mile area characterized by very high existing levels of nighttime light leading to Angeles National Forest and the northern edge of the City of Santa Clarita to the north, the edge of the City of San Bernardino in San Bernardino County to the east, the Pacific Ocean to the south, and the Santa Monica Mountains National Recreation Area and the western edge of the City of Oxnard in Ventura County to the west (Figure 3.1.2-4, *Nighttime Light Levels*).[32] As shown in Figure 3.1.2-3, there are several existing street lights within the project site, including lamps that provide uplighting along the pedestrian paths, historic entry plaza, and the Los Angeles Union Station building.

Nighttime and Daytime Glare: Perceived glare is the unwanted and potentially objectionable sensation as observed by a person looking directly into the light source (e.g., the sun, the sun's reflection, automobile headlights, or other light fixtures). Reflective surfaces on buildings, car windshields, solar panels, and so forth can expose people and property to varying levels of glare.[33] Within Los Angeles County, the major sources of nighttime and daytime glare are paved roads (when hot, wet, oiled, or smooth), reflective building and infrastructure surfaces (e.g., glass curtain walls), the reflections from motor vehicles, and reflective water bodies. Over hot pavement, light is refracted or bends upward, which can result in a similar glare effect to what is caused by reflective (typically wet, oiled, metallic, or glass) surfaces. The general project area has a relatively high level of glare due to the abundance of light-reflective paved ground surfaces (hot, wet, oiled, or smooth concrete, brick, and asphalt), reflective building/structure facade surfaces (glass, marble, metal, glossy painted surfaces, and solar panels), metallic sculptures and signs, reflective surfaces on the Los Angeles River (concrete and water), and metal/glass on transportation vehicles (cars, trucks, and rail cars) in the area.

[32] NASA Earth Observatory/NOAA NGDC. April and October 2012. Earth at Night 2012. Available from Google Earth.

[33] Rensselaer Polytechnic Institute, Troy, NY. Revised 2007. *NLPIP Lighting Answers: Light Pollution - What is Glare?* Available at: http://www.lrc.rpi.edu/programs/nlpip/lightinganswers/lightpollution/glare.asp

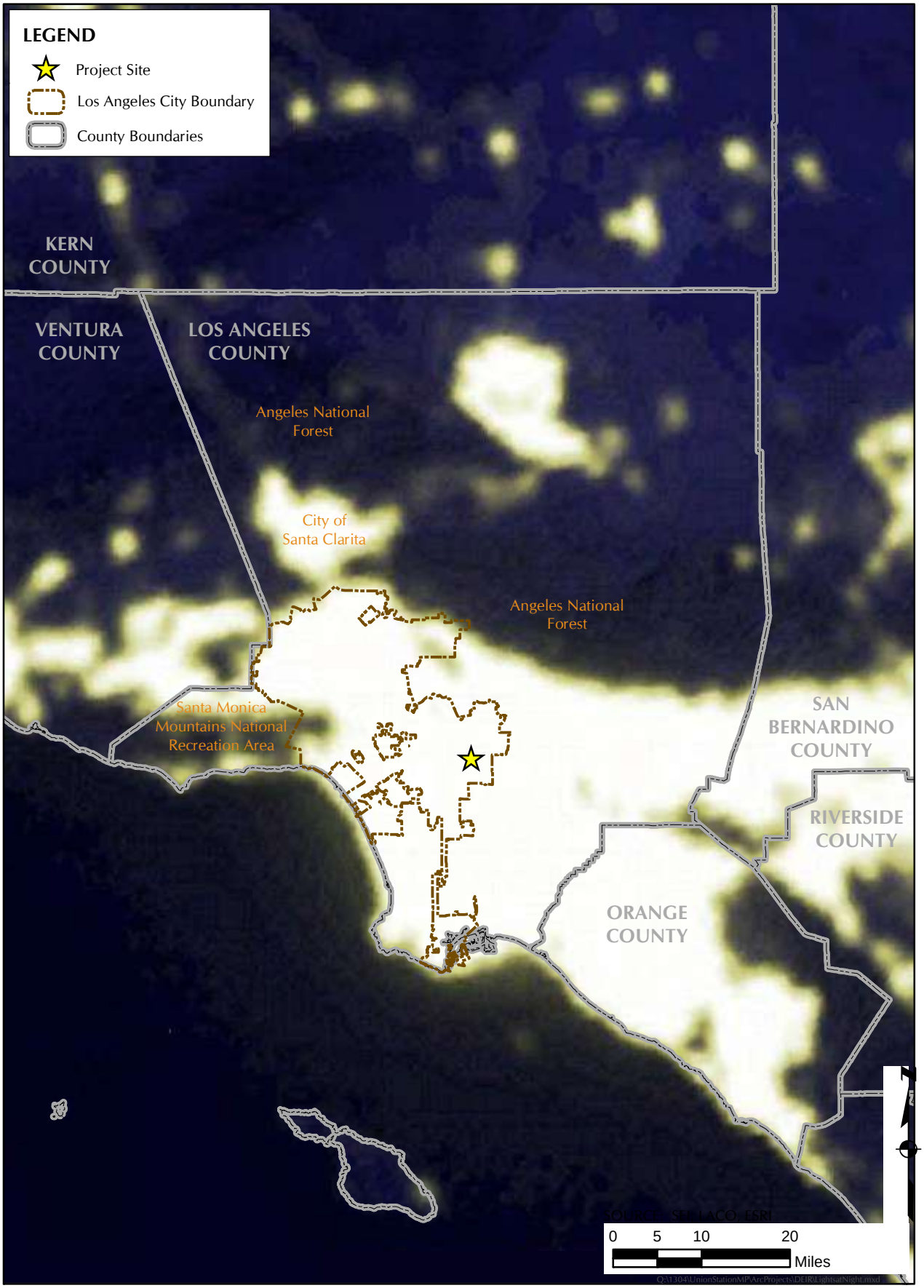


Figure 3.1.2-4. Nighttime Light Levels

The immediate vicinity of the project site does not produce as much glare as the Financial District, in which the multitude of densely concentrated high-rise buildings reflect light on other buildings and periodically produce glare at street level. However, the refractive and reflective concrete, brick, asphalt, and glass surfaces in the project site do produce an existing source of glare.

3.1.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of four questions when addressing the potential for significant impacts to aesthetics. Would the proposed project:

(a) Have a substantial adverse effect on a scenic vista?

The proposed project would result in less than significant impacts in regard to having a substantial adverse effect on a scenic vista. The project site is not visible from state-designated or county-designated scenic vista points due to distance, an intended directional vista toward the north, and intervening topography. The installation of new and replacement street trees along Alameda Street and other Los Angeles Union Station forecourt and esplanade improvements, including a small transit-serving building, would not be visible from these distant scenic vistas.

The proposed project would not adversely affect the viewshed of Los Angeles Union Station (a unique urban or historic feature). Los Angeles Union Station Passenger Terminal and Grounds is located within the project site; the installation of additional trees along the east sidewalk of Alameda Street where there are no existing street trees would affect public access to views of unique urban or historic features from park lands and public rights-of-way, as sycamore trees (or similar species) can reach 70 to 100 feet in height.[34] Additionally, the small transit-serving building and associated 15-foot-tall translucent shade structure would be located at the northern end of the Forecourt and would be designed with complimentary materials to the historic passenger terminal, and would not detract from the primary entrance of Los Angeles Union Station, which is the primary focal point of the western façade of this building. However, the sycamores (or similar species) would be installed outside the major axis between El Pueblo at Los Angeles Plaza Park and the main entrance and 135-foot-high clock tower of the historic Los Angeles Union Station Passenger terminal, the viewshed of which would be maintained by retaining the existing palm trees on the Los Angeles Union Station site. Due to the approximately 160-foot distance between the proposed shade trees along Alameda Street and the western façade of the Los Angeles Union Station terminal building, the clock tower and at least a portion of the Los Angeles Union Station terminal building would still be visible from the observation deck of the historic Los Angeles City

[34] Debbie Shaughnessy, HGIC Horticulture Specialist, and Bob Polomski, Extension Consumer Horticulturist, Clemson University. (New 06/99. Images added 11/06.) *Sycamore.* Available at: http://www.clemson.edu/extension/hgic/plants/landscape/trees/hgic1022.html

Hall building (see Photo 1 in Figure 3.1.2-3). The public view of the 80-foot-high United States Post Office – Terminal Annex would not be affected by the proposed project because it is already not visible from the portion of Alameda Street within the project site due to the presence of the approximately 50-foot-high Mozaic Apartment complex in the foreground.[35] The raised approximately 50-foot-high Plaza Substation building within Los Angeles Plaza Park (near the project site) would be less visible from Alameda Street than it is currently visible, but as the building is currently well hidden behind a large ficus tree, impacts from the proposed project on this view would be less than significant (see Figures 3.1.2-1 and 3.1.2-3, Photo 28).[36] The bicycle racks and storage facility and the small transit-serving building within the North Forecourt would be located near the existing Mozaic Apartments complex, smaller than the new trees that would surround the forecourt, and not affect vistas of unique urban or historic features. As shown in Figure 3.1.2-3, the project site is located on the opposite side of mature trees at El Pueblo from Plaza Church, First Cemetery of Los Angeles, and U.S. Courthouse and Post Office; the proposed project would not affect views to or from these historic features (Photos 3, 39, 40, and 41). Therefore, the proposed project would result in less than significant impacts to aesthetics related to scenic vistas, and no mitigation is required.

(b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

The proposed project would result in no impacts in regard to substantially damaging scenic resources within a state scenic highway. The proposed project would not be visible from any eligible or officially designated state scenic highways due to distance, intervening topography, and the built environment, as the nearest designation (State Route 110)[37] is located 1.3 mile away. The general project area, inclusive of the 498-foot-tall MTA Gateway Building near the project site, cannot be viewed from officially designated or eligible state scenic highways, historic parkways, or county scenic highways, due to distance, intervening topography, and the built environment. The installation of new and replacement street trees along Alameda Street and other Los Angeles Union Station forecourt and esplanade improvements, including a small transit-serving building, would not be visible from these distant scenic highways. Therefore, the proposed project would result in no impacts to aesthetics related to scenic resources within a state scenic highway, and mitigation would not be required.

[35] City of Los Angeles Department of City Planning. 1995. *Alameda District Specific Plan: Section III Project Description.* Available at: http://libraryarchives.metro.net/DPGTL/unionstation/docsAlamedaDSP/1995_Alameda_District_Section_II.pdf

[36] Water and Power Associates. Accessed 17 February 2017. *Early Los Angeles Historical Buildings (1900-1925)*. Available at: http://waterandpower.org/museum/Early_LA_Buildings%20(1900%20-%201925)_Page_2.html

[37] The Central City Community Plan and Central City North Community Plan also designate State Route 110 as a scenic freeway.

(c) Substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed project would result in less than significant impacts in regard to substantially degrading the existing visual character or quality of the site and its surroundings. The proposed project would replace an existing parking lot with a forecourt, small transit-serving building, shade structure, and shade trees and include the installation of street trees, which would benefit the existing visual character or quality of the site and its surroundings. The proposed project would involve the removal of mature trees within the Los Angeles Union Station site, along Alameda Street, and the median within Los Angeles Street. Approximately 38 trees would be removed as a result of the proposed project. However, approximately 87 trees would be installed as part of the proposed project, for a net increase of approximately 49 trees in the project site. The proposed forecourt and esplanade improvements would enhance the visual character or quality of the project area.

Landscaping. The replacement of four ornamental trees (unique species to Los Angeles Union Station site) that parallel the existing row of paired palm trees along the historic Los Angeles Union Station terminal building within the center of an existing parking lot with a row of six shade trees and a bioswale along the eastern edge of the new forecourt, in combination with the replacement of the seven existing southern magnolia trees near La Petite Academy/First 5 LA with nine new shade trees and a bioswale using the same plant palette would unify the overall visual character and enhance the visual quality of the Los Angeles Union Station site by emphasizing the axis created by the existing row of 32 paired palm trees and the existing landscaping grid pattern using pairs of trees or rows of six trees. The installation of two rows of six sycamore trees (or similar) flanking the new multi-use path with enhanced paving on the eastern sidewalk of Alameda Street and framing the western edge of the new forecourt would further enhance the landscaping grid pattern within the vicinity of the new forecourt because they would be aligned with the six new shade trees and bioswale along the eastern edge of the new forecourt. Further, installation of new open canopied street trees would be consistent with City General Plan Policies 5.3.1(a) and 5.8-2(c).The installation of a bioswale and four new shade trees on the western side of the existing La Petite Academy/First 5 LA parking lot would provide visual shielding of the parking lot from the Alameda esplanade, which would enhance the view of the Los Angeles Union Station site from Alameda Street. The installation of approximately 25 new sycamore trees (or similar) along the eastern ROW of Alameda Street and replacement of approximately 15 existing alternating tree species with a total of approximately 37 new sycamore trees along the western ROW of Alameda Street would create a unified street tree pattern where street trees do not currently provide adequate shade for pedestrians. The removal of the existing palms within the median of Los Angeles Street would reduce the visual connectivity between the palms at the Los Angeles Union Station site and El Pueblo; however, impacts would be less than significant due to the contrast in palm tree species, form and height between the trees at the Los Angeles Union Station site and Los Angeles Street, and the hardscape enhancements which would emphasize the visual connectivity between the two sites.

Hardscape. The proposed project would not affect the historic facades within the project site. The enhanced paving and widening of the northern portion of the Los Angeles Union Station site entrance,

which would replace a concrete path and asphalt paved driveway with paving more similar in scale to the brick sidewalk in front of the west façade of the historic Los Angeles Union Station terminal, would not affect the existing rows of palm trees flanking existing pedestrian paths and the historic entry plaza. The installation of enhanced/new paving and refurbishment of existing paving in select areas of the existing brick sidewalk adjacent to the west façade of the historic Los Angeles Union Station terminal would restore the intended architectural character of the walkway. Repaving the internal road in front of the main entrance to the historic Los Angeles Union Station terminal would enhance the visual unity between the existing historic entry plaza and the new paved internal road, north and south pedestrian paths, enhanced paving for the Alameda esplanade, enhanced paving for the crosswalk across Alameda Street between the Los Angeles Union Station site and Los Angeles Street, and enhanced paving for Los Angeles Street. The partial closure of Los Angeles Street at Alameda/El Pueblo for expansion of the sidewalk at Placita de Delores would increase the visual connectivity between Los Angeles Union Station and Los Angeles Plaza Park, and the contrasting pavers to demarcate the historic Marchassault Street and decorative pavers to demarcate the location of historic Zanja Madre would enhance the visual quality. New bollards to match the existing bollards near El Pueblo would blend with the existing visual character. The installation of medians along Alameda Street would enhance the pedestrian scale of the street. The bicycle racks and storage facility and the pavilion within the North Forecourt would be located near the existing Mozaic Apartments complex, smaller than the new trees that would surround the forecourt, and contribute positively to the overall visual character.

Buildings. The 10-foot-tall small transit-serving building and associated 15-foot-tall shade structure would be located at the northern end of the Forecourt and would be designed with complimentary materials to the historic passenger terminal, and would not detract from the primary entrance of Los Angeles Union Station, which is the primary focal point of the western façade of this building. Both structures would be designed consistent with the *Secretary of the Interior's Standards*, such that the massing, the finishes, and the building materials are complimentary, but distinct from the façade of the historic LAUS. The 10-foot-tall building would have a façade which responds to the aesthetic of adjacent buildings (i.e., Mozaic Apartments and the historic Union Station terminal). The 15-foot-tall shade structure would have a translucent shade-providing material to avoid blocking any views.

Therefore, the proposed project would result in less than significant impacts to aesthetics related to substantially degrading the existing visual character or quality of the site and its surroundings, and mitigation would not be required.

(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project would result in no impacts in regard to creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The proposed project includes the installation of 12 new pedestrian lights and traffic control signal pole modifications along Alameda Street, which contains existing vehicle-scale street lights and traffic control signal pole lights. The forecourt would include new lighting that would be comparable to existing uplighting along the

pedestrian paths, historic entry plaza, and lighting on the Los Angeles Union Station building, as well as a water feature that would have the potential to increase glare comparable to the existing asphalt parking lot when its surface is wet after a rain event. Installation of new lighting within the forecourt, including a small transit-serving building, and pedestrian-scale street lights would be consistent with City General Plan Policies 5.2.2 and 5.3.1(a). The enhanced paving would replace existing smooth asphalt and concrete hardscape surfaces with a textured surface that would reduce the existing glare levels in these portions of project site. Additionally, the next increase of 49 trees would provide shade, which would result in an overall reduction of nighttime light levels and sources of glare. Installation of new open canopied street trees would be consistent with City General Plan Policies 5.3.1(a) and 5.8-2(c). The proposed project would not have an adverse effect on day or nighttime views in the area. Therefore, the proposed project would result in no impacts to aesthetics related to the creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area, and mitigation would not be required.

3.1.4 Cumulative Impacts

The incremental impact of the proposed project to aesthetics, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, would be less than significant.

The State CEQA Guidelines recommend the consideration of four questions when addressing the potential for significant cumulative impacts to aesthetics. Would the proposed project:

(a) Have a substantial adverse effect on a scenic vista?

The proposed project would not contribute incrementally to cumulative impacts regarding having a substantial adverse effect on a scenic vista. The proposed project would result in no impacts to state-designated or county-designated scenic vistas. The proposed project would result in less than significant impacts to city-designated scenic vistas (unique or historic features). The installation of additional trees along the east sidewalk of Alameda Street as part of the proposed project where there are no existing street trees would affect public access to views of unique urban or historic features from park lands and public ROWs, as sycamore trees (or similar) can reach 70 to 100 feet in height.[38] However, the sycamores would be installed outside the major axis between El Pueblo at Los Angeles Plaza Park and the main entrance and 135-foot-high clock tower of the historic Los Angeles Union Station Passenger terminal, the viewshed of which would be maintained by retaining the existing palm trees on the Los

[38] Debbie Shaughnessy, HGIC Horticulture Specialist, and Bob Polomski, Extension Consumer Horticulturist, Clemson University. (New 06/99. Images added 11/06.) *Sycamore.* Available at: http://www.clemson.edu/extension/hgic/plants/landscape/trees/hgic1022.html

Angeles Union Station site. As the related projects would not involve additional street improvements with high visibility along Alameda Street or Los Angeles Street, related projects would not affect these scenic vistas. Therefore, the proposed project would not contribute incrementally to cumulative impacts regarding having a substantial adverse effect on a scenic vista, and mitigation would not be required.

(b) Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

The proposed project would not contribute incrementally to cumulative impacts regarding substantially damaging scenic resources within a state scenic highway. The proposed project would result in no impacts regarding state scenic highways. The installation of new and replacement street trees along Alameda Street and other Los Angeles Union Station forecourt and esplanade improvements would not be visible from eligible or officially designated scenic highways. Therefore, the proposed project would not contribute incrementally to cumulative impacts regarding scenic resources within a state scenic highway, and mitigation would not be required.

(c) Substantially degrade the existing visual character or quality of the site and its surroundings?

The proposed project would not contribute incrementally to cumulative impacts regarding substantially degrading the existing visual character or quality of the site and its surroundings. The proposed project would result in no impacts to visual character or quality. The proposed project would not affect the historic facades within the project site. The enhanced paving and widening of the northern portion of the Los Angeles Union Station site entrance, which would replace a concrete path and asphalt paved driveway with paving more similar in scale to the brick sidewalk in front of the west façade of the historic Los Angeles Union Station terminal, would not affect the existing rows of palm trees flanking existing pedestrian paths and the historic entry plaza. Therefore, the proposed project would not contribute incrementally to cumulative impacts regarding substantially degrading the existing visual character or quality of the site and its surroundings, and mitigation would not be required.

(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The proposed project would not contribute incrementally to cumulative impacts regarding creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The proposed project would result in less than significant impacts to light and glare as a result of the installation of new lights and a water feature which would be new source of glare within a project site characterized by a high existing level of nighttime light and daytime glare. Furthermore, the forecourt would include new lighting that would be comparable to existing uplighting, the water feature which would have the potential to increase glare comparable to the existing asphalt parking lot when its surface is wet after a rain event, the enhanced paving would replace existing smooth asphalt and concrete hardscape surfaces with a textured surface which would reduce the existing glare levels in these portions of project site, and the next increase of 49 trees would provide shade which would result in an overall reduction of nighttime light levels and sources of glare. Therefore, the proposed project

would not contribute incrementally to cumulative impacts regarding creation of a new source of substantial light or glare which would adversely affect day or nighttime views in the area, and mitigation would not be required.

3.1.5 Mitigation Measures

Mitigation would not be required.

3.1.6 Level of Significance after Mitigation

Impacts to scenic vistas would be less than significant.

There would be no impacts to scenic highways, visual character/quality, or light/glare.

3.2 Agriculture and Forestry Resources

This section of the Environmental Impact Report (EIR) analyzes potential impacts to agriculture and forestry resources from construction, operation, and maintenance of the proposed Forecourt and Esplanade Improvements Project (proposed project). The analysis of agriculture and forestry resources consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

3.2.1 Regulatory Setting

Federal

There are no applicable federal plans or policies for this issue area.

State

Farmland Mapping and Monitoring Program (FMMP)

The FMMP was established in 1982 to assess the location, quality, and quantity of agricultural lands in the State of California and conversion of these lands over time. The goal of the FMMP is to provide consistent and impartial data to decision makers for use in planning for the future of California's agricultural land resources. The California Department of Conservation (CDC) applies the Natural Resources Conservation Service (NRCS) soil classifications to identify agricultural lands, and these agricultural designations are used in planning for the present and future of California's agricultural land resources. The DOC has a minimum mapping unit of 10 acres, with parcels that are smaller than 10 acres being absorbed into the surrounding classifications. The list below provides a comprehensive description of all the categories mapped by the CDC:

- Prime Farmland. Farmland that has the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- Farmland of Statewide Importance. Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- Unique Farmland. Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

- Farmland of Local Importance. Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee.

- Grazing Land. Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

- Urban and Built-up Land. Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- Other Land. Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines and borrow pits; and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

California Land Conservation Act (Williamson Act)

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is the State's primary program for the conservation of private land in agricultural and open space. The Williamson Act (California Government Code Section 51200-51297.4) enables local governments to enter into contracts with private landowners in order to restrict specific parcels of land to agricultural or related open space use in return for reduced property tax assessments.

Farmland Security Zone Act

The Farmland Security Zone Act is similar to the Williamson Act and was passed by the California State Legislature in 1999 to ensure that long-term farmland preservation is part of public policy. Farmland Security Zone Act contracts are sometimes referred to as "Super Williamson Act Contracts." Under the provisions of this act, a landowner already under a Williamson Act contract can apply for Farmland Security Zone status by entering into a contract with the county. Farmland Security Zone classification automatically renews each year for an additional 20 years. In return for a further 35 percent reduction in the taxable value of land and growing improvements (in addition to Williamson Act tax benefits), the owner of the property promises not to develop the property into non-agricultural uses.

Local

Alameda District Specific Plan

The proposed project site is situated within the Alameda District Specific Plan area, whose jurisdiction is bounded generally by Alameda Street, North Main Street, Vignes Street, the Santa Ana Freeway (I-5/101), and the El Monte Bus way in the City of Los Angeles. Section 7 Land Use of the Alameda District Specific Plan was referenced to identify any goals, policies, or land uses within the boundaries of the Alameda District Specific Plan associated with agriculture and forestry resources. The Land Use Section does not mention Farmland, Forest Land, or Timberland because the land use within the Alameda District contains no agriculture or forestry resources and covers the use of residential and commercial land use.

City of Los Angeles General Plan

The proposed project site is located within the City of Los Angeles and subject to the City of Los Angeles General Plan. The City's agricultural lands objective, found in the Conservation Element of the General Plan, is to "retain in agricultural use, as appropriate, the last state-designated significant agricultural parcel within the city, the Pierce College parcel." Pierce College is located in the San Fernando Valley, over 25 miles to the northeast of the proposed project site. The City's animal keeping, nurseries, crop gardens objective is to "retain, to the extent feasible, the last remaining agricultural features of the city as part of the city's heritage and economy," which has developed into a policy of encouraging the retention of parcels in agricultural and low density land use and zoning categories that will encourage their retention in agricultural and related uses. These agricultural or animal keeping zoned lands within the City of Los Angeles are predominantly located in the San Fernando Valley. The Central City North Community Plan, a part of the Land Use Element of the General Plan, does not discuss agricultural or forestry resources because of the urban nature of the Central City and Central City North Community Plan Area.

Central City Community Plan

The proposed project site is situated within the Central City North Community Plan. The Central City Community Plan was adopted on December 15, 2000. The Central City Community Plan is the City's General Plan guidance for land use and circulation for the areas surrounding the project site. The Draft Downtown Community Plan 2040 (DTLA 2040) serves as an update for both the Central City Community Plan as well as the Central City North Community Plan. The DTLA 2040 provides a collective vision for Downtown's future including policies, plans, and programs that align with the city's long-term priorities.

The Central City Community Plan is one of the 35 community plans in the City of Los Angeles. It constitutes the Land Use Element of the General Plan for this portion of the City and is required by State law. The Community Plan was developed in the context of promoting a vision of the Central City area as a community that encourage traditional and nontraditional sources of open space by recognizing and capitalizing on linkages with transit, parking, historic resources, cultural facilities, and social services

programs. The Community Plan also promotes improvement of Downtown's pedestrian environment in recognition of its important role in the efficiency of Downtown's transportation and circulation systems and in the quality of life for its residents, workers, and visitors. The Land Use Section does not mention Farmland, Forest Land, or Timberland because the land use within the Central City Community Plan Area contains no agriculture or forestry resources and covers the use of residential and commercial land use.

Central City North Community Plan

The proposed project site is situated within the Central City North Community Plan whose jurisdiction is bounded by the residential community of Central City North is predominately concentrated in the area west of Chinatown. Of the 2005 acres that comprise Central City North, approximately 93 acres or 5 percent is currently zoned and planned for residential uses. All of the residential is planned for multi-family dwelling units although single family residences can be found in a few scattered locations. There are approximately 4,043 dwelling units and nearly all of the housing is low-rise multi-family at a net density of 39 units per acre. The residential areas are located west of the Pasadena Freeway and just southeast of the Hollywood-Pasadena Freeway Interchange. The William Mead Housing Project, operated by the City Housing Authority, is also located in Central City North with over 400 units located just east of Chinatown and north of Union Station.

Chapter III of the Central City North Community Plan text contains goals, objectives, policies, and programs for all appropriate land use issues, such as residential, commercial, and industrial, as well as public and institutional service system categories pursuant to Government Code Section 65302(a) requiring a land use element. The Central City North Community Plan designates the proposed general distribution and general location and extent of uses of the land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid waste disposal facilities, and other categories of public and private uses of land. Chapter III Land Use of the Central City North Community Plan identifies any goals, policies, or land uses within the boundaries of the Central City Community Plan associated with agriculture and forestry resources. The Land Use Section does not mention Farmland, Forest Land, or Timberland because the land use within the Central City North Community Plan Area contains no agriculture or forestry resources and covers the use of residential and commercial land use.

City of Los Angeles Municipal Code – Zoning Code

The City of Los Angeles Zoning Code designates, regulates, and restricts the location and use of buildings, structures and land, for agriculture, residence, commerce, trade, industry or other purposes in order to encourage the most appropriate use of land, conserve and stabilize the value of property, provide adequate open spaces for light and air, prevent and fight fires, and promote the general welfare. The City of Los Angeles Zone Information and Map System (ZIMAS) provides detailed information on any property in the City of Los Angeles to assist the public, and indicates that the proposed project site is under ZI-2358 (River Improvement Overlay District), ZI-2427 (Freeway Adjacent Advisory Notice for Sensitive Uses), ZI-2129 (East Los Angeles State Enterprise Zone), ZI-1117 (MTA

Project), and ZI-2182 (Alameda District Specific Plan), and not for agriculture, forestry, or timberland production.

3.2.2 Affected Environment/Existing Conditions

Prime Farmland, Unique Farmland, or Farmland of Statewide Importance

The most recent mapping (2014) of the City of Los Angeles for Farmland undertaken by the CDC FMMP was reviewed for the project site. Prime Farmland in the City of Los Angeles is limited to the San Fernando Valley; the nearest Prime Farmland to the project site is located over 16 miles to the northwest in the Sepulveda Basin located in Encino, California.[1] The CDC FMMP has identified the project site as Urban and Built-Up Land at the statewide scale, and the area has not been surveyed at the county scale.[2] The CDC FMMP does not designate any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance east of the Interstate 405 Freeway or south of the San Gabriel Mountains in Los Angeles County at the statewide scale, and the area east of the I-405 and south of the San Gabriel Mountains has not been recently surveyed at the county scale (Figure 3.2.2-1, *Los Angeles County Important Farmland*). Based on review of the land use designations and applicable Important Farmland map for the proposed project site, there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located in or immediately adjacent to the project site.

California Land Conservation Act (Williamson Act) Preserves and Other Lands Zoned for Agriculture

Williamson Act Preserves

According to the Los Angeles County Williamson Act Fiscal Year 2015/2016 map by the CDC Division of Land Resource Protection, the project site and surrounding communities are not enrolled in a Williamson Act contract.[3]

[1] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Accessed 26 April 2016. *California Important Farmland Finder.* Available at: http://maps.conservation.ca.gov/ciff/ciff.html

[2] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. 2012. *Important Farmland in California*. Statewide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2012/fmmp2012_wallsize.pdf. 2014 Countywide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/los14.pdf

[3] California Department of Conservation, Division of Land Resource Protection. 2016. *Los Angeles County Williamson Act FY 2015/2016.* Available at: ftp:// ftp://ftp.consrv.ca.gov/pub/dlrp/wa/LA_15_16_WA.pdf

Lands Zoned for Agriculture

There are no existing farmlands and lands designated for agricultural uses in the vicinity of the project site. The project site is located in the Central City North Community. A very small portion (approximately 0.5 acres) west of North Alameda Street is located within the Central City Community within the right-of-way of North Los Angeles Street.[4] This includes hybrid industrial land use to the north, public facilities land use and heavy industrial land use to the east and south, and community commercial land use to the west according to the City of Los Angeles General Plan Land Use Map.[5,6] The City of Los Angeles has designated the project site as CR: Regional Commercial, and adjacent properties as HI: Hybrid Industrial Zone to the north, PF: Public Facilities Zones to the east and south, designated as property as owned and used by a government agency, M3: Heavy Industrial Zone to the south, CM: Commercial Manufacturing Zone to the south, and OS: Open Space Zone and PF: Public/Quasi-Public Facilities Zones to the west in both the City's General Plan[7,8] and Zoning Plan.[9,10] The most recent mapping (2014) of the City of Los Angeles for Farmland undertaken by the CDC FMMP was reviewed for the project site. The CDC FMMP has identified the area as Urban and Built-Up Land at the statewide scale and the area has not been surveyed at the County scale.[11] Based on the review of the land use designations and applicable Important Farmland map for the project site, there are no Farmlands located in or immediately adjacent to the project site. No agricultural uses or related operations are present within the project site or surrounding area. Due to its urban setting, the site area is not included in the FMMP.

[4] City of Los Angeles. Adopted 8 January 2003. *Central City Community Plan*. Los Angeles, CA.

[5] City of Los Angeles Department of City Planning. Accessed 29 April 2016. *General Plan Land Use Map: Central City North Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

[5] City of Los Angeles Department of City Planning. Accessed 2 May 2016. *General Plan Land Use Map: Central City Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

[7] City of Los Angeles Department of City Planning. Accessed 29 April 2016. *General Plan Land Use Map: Central City North Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

[7] City of Los Angeles Department of City Planning. Accessed 2 May 2016. *General Plan Land Use Map: Central City Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

[9] City of Los Angeles Department of City Planning. n.d. *City of Los Angeles Zone Information and Map Access System (ZIMAS*). Available at: http://zimas.lacity.org/

[10] American Legal Publishing Corporation. 2013. *Los Angeles Municipal Code, Chapter I (Planning and Zoning Code), Article 2, Section 12.19.* Available at: https://law.resource.org/pub/us/code/city/ca/LosAngeles/Municipal/chapter01.pdf

[11] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. 2012. *Important Farmland in California*. Statewide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2012/fmmp2012_wallsize.pdf. 2014 Countywide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/los14.pdf

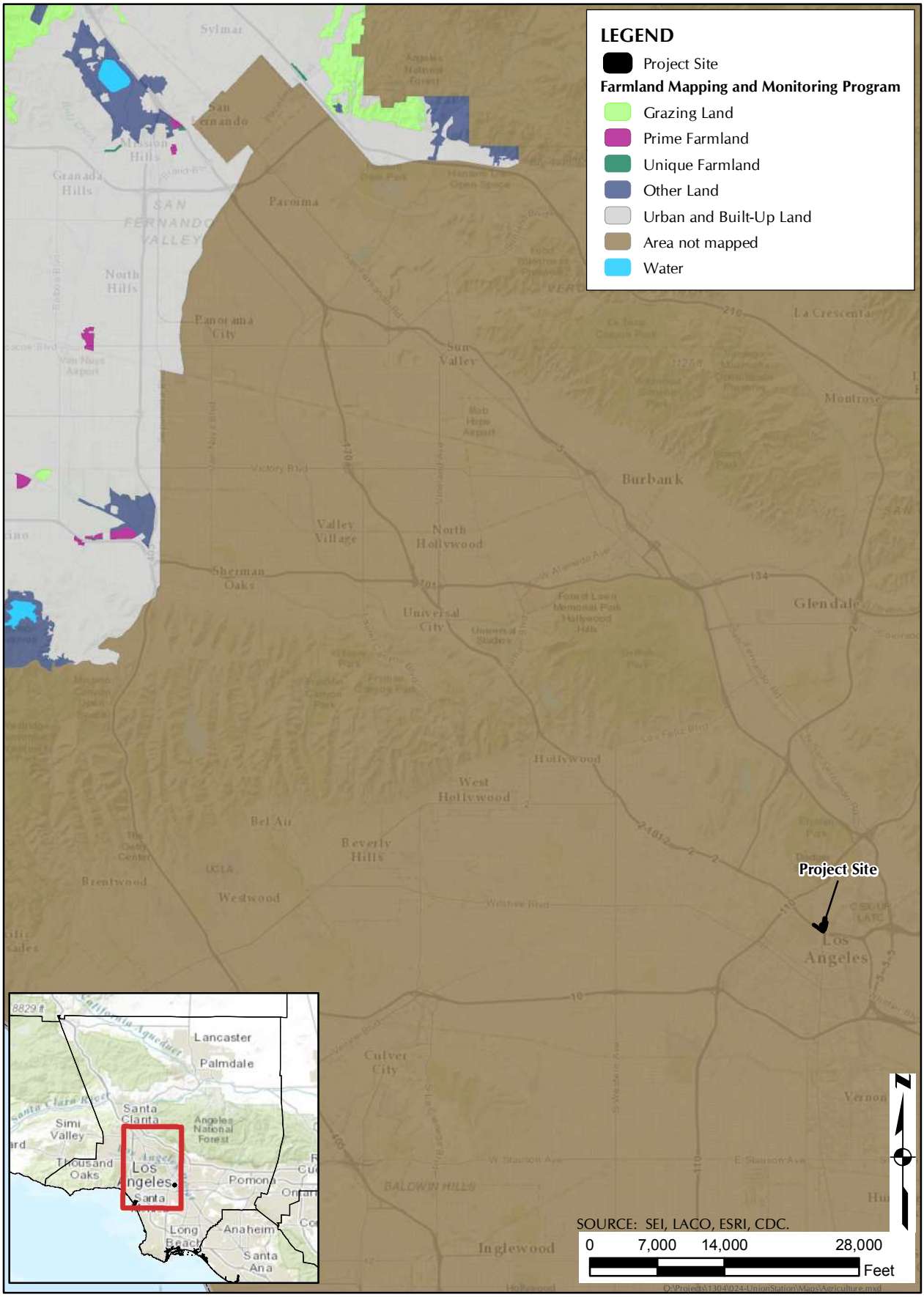


Figure 3.2.2-1. Los Angeles County Important Farmland

Lands Zoned for Forest and Timberland Production

The project site is located in an industrial zone in an urban area. There are no forest or timberland resources located in the vicinity of the project site. Similarly, there are no lands used for agriculture located in the vicinity of the project site.

3.2.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of five questions when addressing the potential for significant impacts to agriculture and forestry resources:

(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The proposed project would result in no impacts to agriculture and forestry resources in relation to the conversion of Farmland. The CDC FMMP has identified the project site as Urban and Built-Up Land at the statewide scale, and the area has not been surveyed at the county scale.[12] All construction activities would be undertaken within the existing designated urban and built-up land area. No prime or unique farmland or farmland of statewide importance is located within the proposed project area. There will be no permanent conversion of land to non-agricultural use due to the proposed project.[13] There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located in or immediately adjacent to the project site. Therefore, there would be no impacts to agriculture and forestry resources related to the conversion of Farmland, and no mitigation is required.

(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

The proposed project would result in no impacts to agriculture and forestry resources in relation to a conflict with existing zoning for agricultural use, or a Williamson Act contract. Based on the review of the CDC FMMP, the proposed project area is designated non-enrolled land and not enrolled under a Williamson Act contract. [14] There are no existing farmlands and lands designated for agricultural uses in the vicinity of the project site. The City of Los Angeles has designated the project site as CR: Regional

[12] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. 2012. *Important Farmland in California*. Statewide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2012/fmmp2012_wallsize.pdf. 2014 Countywide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/los14.pdf

[13] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Accessed 26 April 2016. *California Important Farmland Finder.* Available at: http://maps.conservation.ca.gov/ciff/ciff.html

[14] California Department of Conservation, Division of Land Resource Protection. 2016. *Los Angeles County Williamson Act FY 2015/2016.* Available at: ftp:// ftp://ftp.consrv.ca.gov/pub/dlrp/wa/LA_15_16_WA.pdf

Commercial, and adjacent properties as HI: Hybrid Industrial Zone to the north, PF: Public Facilities Zones to the east and south, designated as property as owned and used by a government agency, M3: Heavy Industrial Zone to the south, CM: Commercial Manufacturing Zone to the south, and OS: Open Space Zone and PF: Public/Quasi-Public Facilities Zones to the west in both the City's General Plan[15,16] and Zoning Plan.[17,18] The CDC FMMP has identified the area as Urban and Built-Up Land at the statewide scale and the area has not been surveyed at the County scale.[19] Based on the review of the land use designations and applicable Important Farmland map for the project site, there are no Farmlands located in or immediately adjacent to the project site. No agricultural uses or related operations are present within the project site or surrounding area. Due to its urban setting, the site area is not included in the FMMP. Therefore, based on the analysis of the City of Los Angeles General Plan Land Use Maps.[20,21] and status of Williamson Act contracts, there would be no impacts to agriculture and forestry resources related to a conflict with existing zoning for agricultural use or a Williamson Act contract, and no mitigation is required.

[15]City of Los Angeles Department of City Planning. Accessed 29 April 2016. *General Plan Land Use Map: Central City North Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

[7] City of Los Angeles Department of City Planning. Accessed 2 May 2016. *General Plan Land Use Map: Central City Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

[17] City of Los Angeles Department of City Planning. n.d. *City of Los Angeles Zone Information and Map Access System (ZIMAS*). Available at: http://zimas.lacity.org/

[18] American Legal Publishing Corporation. 2013. *Los Angeles Municipal Code, Chapter I (Planning and Zoning Code), Article 2, Section 12.19.* Available at: https://law.resource.org/pub/us/code/city/ca/LosAngeles/Municipal/chapter01.pdf

[19] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. 2012. *Important Farmland in California*. Statewide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2012/fmmp2012_wallsize.pdf. 2014 Countywide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/los14.pdf

[20] City of Los Angeles Department of City Planning. Accessed 29 April 2016. *General Plan Land Use Map: Central City North Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

[22] City of Los Angeles Department of City Planning. Accessed 2 May 2016. *General Plan Land Use Map: Central City Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

(c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

The proposed project would result in no impacts to agriculture and forestry resources in relation to conflict with existing zoning for, or cause rezoning of forest land, timberland, or timberland rezoned Timberland Production. The City of Los Angeles has designated the project site as CR: Regional Commercial, and adjacent properties as HI: Hybrid Industrial Zone to the north, PF: Public Facilities Zones to the east and south, designated as property as owned and used by a government agency, M3: Heavy Industrial Zone to the south, CM: Commercial Manufacturing Zone to the south, and OS: Open Space Zone and PF: Public/Quasi-Public Facilities Zones to the west in both the City's General Plan and Zoning Plan.[22,23] The property is not suitable for forestry or timberland development and there are no areas zoned as any type of forestland located within the proposed project area. The proposed project would not require areas adjacent to the proposed project site to be rezoned as the project would be undertaken within the existing designated urban and built-up land area.[24] Therefore, there would be no impacts to agriculture and forestry resources related to conflict with existing zoning for, or causing rezoning of, forest land, timberland, or timberland zoned, and no mitigation is required.

(d) Result in the loss of forest land or conversion of forest land to non-forest uses?

The proposed project would result in no impact to forest lands related to the loss of forest land or conversion of forest land to non-forest uses. The proposed project is located within an existing designated urban and built-up land area and all construction activities would be undertaken within the existing designated urban and built-up land area. The Northgate Crossing Specific Plan Land Use element and Zoning Ordinance were reviewed to determine the compatibility of the proposed project with adopted land use plans, policies, and regulations.[25,26] The City of Los Angeles has designated the project

[22] City of Los Angeles Department of City Planning. n.d. *City of Los Angeles Zone Information and Map Access System (ZIMAS*). Available at: http://zimas.lacity.org/

[23] American Legal Publishing Corporation. 2013. *Los Angeles Municipal Code, Chapter I (Planning and Zoning Code), Article 2, Section 12.19.* Available at: https://law.resource.org/pub/us/code/city/ca/LosAngeles/Municipal/chapter01.pdf

[24] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. 2012. *Important Farmland in California*. Statewide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2012/fmmp2012_wallsize.pdf. 2014 Countywide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/los14.pdf

[25] City of Los Angeles Department of City Planning. n.d. *City of Los Angeles Zone Information and Map Access System (ZIMAS*). Available at: http://zimas.lacity.org/

[26] American Legal Publishing Corporation. 2013. *Los Angeles Municipal Code, Chapter I (Planning and Zoning Code), Article 2, Section 12.19.* Available at: https://law.resource.org/pub/us/code/city/ca/LosAngeles/Municipal/chapter01.pdf

site as CR: Regional Commercial, and adjacent properties as HI: Hybrid Industrial Zone to the north, PF: Public Facilities Zones to the east and south, designated as property as owned and used by a government agency, M3: Heavy Industrial Zone to the south, CM: Commercial Manufacturing Zone to the south, and OS: Open Space Zone and PF: Public/Quasi-Public Facilities Zones to the west in both the City's General Plan and Zoning Plan. Construction of the proposed project would not add or change any land uses. Therefore, the proposed project would have no impacts related to loss of forest land or conversion of forest land to non-forest uses, and no mitigation is required.

(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

The proposed project would result in no impacts to agriculture and forestry resources in relation to changes in the existing environment that, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. Based on the review of the CDC FMMP, the proposed project is located within an existing designated urban and built-up land area and all construction activities would be undertaken within the existing designated urban and built-up land area. [27] The City of Los Angeles has designated the project site as CR: Regional Commercial, and adjacent properties as HI: Hybrid Industrial Zone to the north, PF: Public Facilities Zones to the east and south, designated as property as owned and used by a government agency, M3: Heavy Industrial Zone to the south, CM: Commercial Manufacturing Zone to the south, and OS: Open Space Zone and PF: Public/Quasi-Public Facilities Zones to the west in both the City's General Plan and Zoning Plan. [28,29] The proposed project would not affect the suitability of any designated farmland for development because the existing land use of the project area would not be changed. There are no forest lands in the proposed project area.[30,31] Therefore, there would be no impacts to agriculture or forestry resources related to changes in the existing environment that, due to their location or nature, could result in

[27] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. 2012. *Important Farmland in California*. Statewide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2012/fmmp2012_wallsize.pdf. 2014 Countywide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/los14.pdf

[28] City of Los Angeles Department of City Planning. n.d. *City of Los Angeles Zone Information and Map Access System (ZIMAS*). Available at: http://zimas.lacity.org/

[29] American Legal Publishing Corporation. 2013. *Los Angeles Municipal Code, Chapter I (Planning and Zoning Code), Article 2, Section 12.19.* Available at: https://law.resource.org/pub/us/code/city/ca/LosAngeles/Municipal/chapter01.pdf

[30] City of Los Angeles Department of City Planning. n.d. *City of Los Angeles Zone Information and Map Access System (ZIMAS*). Available at: http://zimas.lacity.org/

[31] American Legal Publishing Corporation. 2013. *Los Angeles Municipal Code, Chapter I (Planning and Zoning Code), Article 2, Section 12.19.* Available at: https://law.resource.org/pub/us/code/city/ca/LosAngeles/Municipal/chapter01.pdf

conversion of Farmland to non-agricultural use or the conversion of forest land to non-forest use, and no mitigation is required.

3.2.4 Cumulative Impacts

The potential for cumulative impacts was evaluated in relation to each of the five questions in the State CEQA Guidelines for agriculture and forestry resources that were considered for the proposed project. The proposed project would result in no impact to agriculture and forestry resources; therefore, there would be no contribution to cumulative impacts on agriculture and forestry resources in the region. As there would be no direct, indirect, or cumulative impacts on agriculture and forestry resources, no mitigation would be required.

3.2.5 Mitigation Measures

No mitigation would be required.

3.2.6 Level of Significance after Mitigation

There would be no impact to agriculture and forestry resources.

3.3 Air Quality

This section of the Environmental Impact Report (EIR) analyzes potential impacts to air quality from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The analysis of air quality consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project study area, anticipated impacts (direct, indirect, and cumulative), mitigation measures and level of significance after mitigation, and alternatives to the proposed project.

Air quality was evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines), and in accordance with the *California Air Resources Board Air Quality and Land Use Handbook*.[1] The evaluation considered the potential to conflict with National and California Ambient Air Quality Standards, 2016–2040 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS), South Coast Air Quality Management Plan, and local community and specific plans.

3.3.1 Regulatory Setting

Federal

Federal Clean Air Act

Congress passed the first major Clean Air Act (CAA) in 1970 (42 U.S. Code [USC] Sections 7401 et seq.). This Act gives the EPA broad responsibility for regulating emissions from many sources of air pollution from mobile to stationary sources. Pursuant to the CAA, the EPA is authorized to regulate air emissions from mobile sources like heavy-duty trucks, agricultural and construction equipment, locomotives, lawn and garden equipment, and marine engines; and stationary sources such as power plants, industrial plants, and other facilities. The CAA sets National Ambient Air Quality Standards (NAAQS) for the six most common air pollutants to protect public health and public welfare. These pollutants include particulate matter, ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead.

For each pollutant, the EPA designates an area as attainment for meeting the standard or nonattainment for not meeting the standard. A maintenance designation entails an area that was previously designated as nonattainment but is currently designated as attainment. The CAA directs states to develop state implementation plans (SIPs) in order to achieve these standards.

[1] California Air Resources Board. *Air Quality and Land Use Handbook.* April 2005. Available at: https://www.arb.ca.gov/ch/handbook.pdf

New Source Performance Standards (NSPS), described in Section 111 of the Clean Air Act and 40 CFR Part 60, are technology based standards that apply to specific categories of stationary sources. These standards are intended to promote use of the best air pollution control technologies, taking into account the cost of such technology and any other non-air quality, health, and environmental impact and energy requirements.

National Ambient Air Quality Standards (NAAQS)

The federal CAA required the U.S EPA to establish NAAQS. The NAAQS set primary standards and secondary standards for specific air pollutants (Table 3.3.1-1, *National Ambient Air Quality Standards*). Primary standards define limits for the intention of protecting public health, which include sensitive populations such as asthmatics, children, and the elderly. Secondary Standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

TABLE 3.3.1-1
NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant		Primary/Secondary	Averaging Time	Level
Carbon monoxide		Primary	8 hours	9 ppm
			1 hour	35 ppm
Lead		Primary and secondary	Rolling 3-month average	0.15 µg/m^3
Nitrogen dioxide		Primary	1 hour	100 ppb
		Primary and secondary	Annual	53 ppb
Ozone		Primary and secondary	8 hours	0.070 ppm
Particulate matter	$PM_{2.5}$	Primary	Annual	12 µg/m^3
		Secondary	Annual	15 µg/m^3
		Primary and secondary	24 hours	35 µg/m^3
	PM_{10}	Primary and secondary	24 hours	150 µg/m^3
Sulfur dioxide		Primary	1 hour	75 ppb
		Secondary	3 hours	0.5 ppm

NOTE: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter.
SOURCE: California Air Resources Board. 4 May 2016. *Ambient Air Quality Standards*. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

State Implementation Plan (SIP)/ Air Quality Management Plans (AQMPs)

A SIP is required by the EPA to ensure compliance with the NAAQS. States must develop a general plan to maintain air quality in areas of attainment and a specific plan to improve air quality for areas of nonattainment. SIPs are a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls. The SIP verifies that the state has a proper air quality management program that adheres to or strives to reach the most up to date emissions requirements. The 1990 amendments to the federal CAA set deadlines for attainment based on the severity of an area's air pollution problem. In adherence to CAA Section 172, states must adopt additional regulatory programs for nonattainment areas. Particularly in California, the SIP not only complies with NAAQS, but also the more stringent CAAQS.

AQMPs, developed by the air districts, are required to ensure compliance with the state and federal requirements. AQMPs contain scientific information and use analytical tools to demonstrate a pathway towards achieving attainment for the criteria air pollutants. The approval process begins when the regional air districts submit their AQMPs to the CARB. CARB is the lead agency and responsible agency for submitting the SIP to the EPA. CARB forwards SIP revisions to the EPA for approval and publication in the *Federal Register*. The Code of Federal Regulations Title 40, Chapter I, Part 52, Subpart F, Section 52.220, lists all of the items included in the California SIP.

Transportation Conformity

Transportation conformity is required under federal CAA Section 176(c) to ensure that federally supported highway and transit project activities are consistent with ("conform to") the purpose and requirements of the SIP. Conformity currently applies to areas that are designated nonattainment, and those redesignated to attainment after 1990 ("maintenance areas" with plans developed under CAA Section 175A) for the following transportation-related criteria pollutants: ozone, particulate matter ($PM_{2.5}$ and PM_{10}), CO, and NO_2. Conformity to the purpose of the SIP means that transportation activities will not cause new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS. The transportation conformity regulation is found in 40 CFR Part 93. Conformity requires reporting on the timely implementation of Transportation Control Measures (TCMs) in ozone nonattainment areas designated as serious or worse, thus reinforcing the link between AQMP/SIPs and the transportation planning process. TCMs are expected to be given funding priority and to be implemented on schedule, and in the case of any delays, any obstacles to implementation have been or are being overcome.

State

California Clean Air Act of 1988

The California CAA of 1988 (Chapter 1568, Statutes of 1988) requires all air pollution control districts in the state to aim to achieve and maintain state ambient air quality standards for ozone, carbon monoxide, and nitrogen dioxide by the earliest practicable date and to develop plans and regulations

specifying how the districts will meet this goal. There are no planning requirements for the state PM_{10} standard. The CARB, which became part of the California Environmental Protection Agency (Cal/EPA) in 1991, is responsible for meeting state requirements of the federal CAA, administrating the California CAA, and establishing the CAAQS. The California CAA, amended in 1992, requires all AQMDs in the state to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants, but there is no penalty for nonattainment. California has also established state standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles, for which there are no national standards.

California Ambient Air Quality Standards

Ambient air quality standards (AAQS) define clean air and are established to protect even the most sensitive individuals. An air quality standard defines the maximum amount of a pollutant that can be present in outdoor air without harm to the public's health. The federal CAA permits states to adopt additional or more protective air quality standards than the National Ambient Air Quality Standards. California has set standards for certain pollutants, such as particulate matter and ozone, which are more protective of public health than respective federal standards (Table 3.3.1-2, *California Ambient Air Quality Standards*). California has also set standards for some pollutants that are not addressed by federal standards.

TABLE 3.3.1-2
CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Pollutant		Averaging Time	Level
Carbon monoxide		8 hours	9 ppm
		1 hour	20 ppm
Lead		30-day average	1.5 µg/m^3
Nitrogen dioxide		1 hour	0.18 ppm
		Annual	0.03 ppm
Ozone		8 hours	0.07 ppm
		1 hour	0.09 ppm
Particulate matter	$PM_{2.5}$	Annual	12 µg/m^3
	PM_{10}	24 hours	50 µg/m^3
		Annual	20 µg/m^3
Sulfur dioxide		1 hour	0.25 ppm
		24 hours	0.04 ppm
Sulfates		24 hours	25 µg/m^3
Hydrogen sulfide		1 hour	0.03 ppm
Vinyl chloride		24 hours	0.01 ppm
Visibility Reducing Particles		Extinction coefficient of 0.23 per km – visibility of 10 miles or more due to particles when relative humidity is less than 70 percent[2]	

NOTE: ppm = parts per million; µg/m^3 = micrograms per cubic meter.
SOURCE: California Air Resources Board. 4 May 2016. *Ambient Air Quality Standards*. Available at: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf

CARB Air Toxics "Hot Spots" Information and Assessment Act of 1987

The California Air Toxics Program is supplemented by the Air Toxics "Hot Spots" program, which became law (AB 2588, Statutes of 1987) in 1987. In 1992, the AB 2588 program was amended by Senate Bill 1731 to require facilities that pose a significant health risk to the community to perform a risk reduction audit and reduce their emissions through implementation of a risk management plan. Under this program, which is required under the Air Toxics "Hot Spots" Information and Assessment Act (Section 44363 of the California Health and Safety Code), facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks when present. In March 2015, the OEHHA adopted "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk

[2] South Coast Air Quality Management District. February 2013. *Final 2012 AQMP*. Available at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan

Assessments" in accordance with the Health and Safety Code, Section 44300. The Final Guidance Manual incorporates the scientific basis from three earlier developed Technical Support Documents to assess risk from exposure to facility emissions. The 2015 OEHHA Final Guidance has key changes including greater age sensitivity in particular for children, decreased exposure durations, and higher breathing rate profiles. Because cancer risk could be up to three times greater using this new guidance, it may result in greater mitigation requirements, more agency backlog, and increased difficulty in getting air permits. Regardless of the change in calculation methodology, actual emissions and cancer risk within South Coast Air Basin has declined by more than 50 percent since 2005.

The CARB provides a computer program, the Hot Spots Analysis and Reporting Program (HARP), to assist in a coherent and consistent preparation of an HRA. HARP2, an update to HARP, was released in March 2015. HARP2 has a more refined risk characterization in HRA and CEQA documents and incorporates the 2015 OEHHA Final Guidance. HARP 2 separates the modules into three independent programs: the Emissions Inventory Module (EIM), Air Dispersion Modeling and Risk Tool (ADMRT), and Risk Assessment Standalone Tool (RAST). As of June 2015, HARP2 is not required by OEHHA on the state level, but it is required by SCAQMD.[3]

Active Transportation Program

The Active Transportation Program (ATP) was approved by Governor Brown in September 2013. The ATP is a program within the California Department of Transportation, which consolidates existing federal and state transportation programs, including the Transportation Alternatives Program, Bicycle Transportation Account, and State Safe Routes to School.[4] The proposed project has received ATP grant funds that contain federal monies, thereby requiring compliance with NEPA.

CARB Air Quality and Land Use Handbook

In April 2005, the CARB published the Air Quality and Land Use Handbook as an informational and advisory guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. Studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. Reducing diesel particulate emissions is one of CARB's highest public health priorities and the focus of a comprehensive statewide control program that is reducing diesel PM

[3] South Coast Air Quality Management District. Risk Assessment Procedures for Rules 1401, 1401.1 and 212. June 5, 2015. Available at: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/riskassprocjune15.pdf?sfvrsn=2

[4] Caltrans Division of Local Assistance. *Active Transportation Program.* January 5, 2017. Available at: http://www.dot.ca.gov/hq/LocalPrograms/atp/

emissions each year. This document highlights the potential health impacts associated with proximity to air pollution sources so planners explicitly consider this issue in planning processes.[5]

Regional

2016–2040 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

The RTP/SCS is a long-range transportation plan that is developed and updated by SCAG every four years. The RTP provides a vision for transportation investments throughout the region. Using growth forecasts and economic trends that project out over a 20-year period, the RTP considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address our mobility needs. The 2016–2040 RTP/SCS includes a strong commitment to reduce emissions from transportation sources to comply with SB 375, improve public health, and meet the National Ambient Air Quality Standards as set forth by the federal Clean Air Act. Under SB 375, the CARB established per capita targets for GHG reduction for cars and light trucks for the SCS. The GHG reduction targets for the SCAG region are 8 percent per capita in 2020 and 13 percent per capita in 2035 compared to 2005 levels.

SCAQMD Air Quality Management Plans

The most recent update to the *SCAQMD Air Quality Management District Air Quality Management Plan* (AQMP) was adopted in 2012 by the SCAQMD Board and the CARB.[6] The AQMP addresses several state and federal planning requirements, incorporating the latest scientific information, primarily in the form of updated emissions inventories, ambient measurements, and new meteorological air quality models.

SCAQMD published the Draft 2016 AQMP in December 2016, which is a comprehensive and integrated plan primarily focused on addressing the ozone standards. The Final 2016 AQMP was approved by the Governing Board on March 3, 2017. The Plan is a regional and multiagency effort (SCAQMD, CARB, SCAG, and U.S. EPA). State and federal planning requirements include developing control strategies, attainment demonstrations, reasonable further progress, and maintenance plans. The 2016 AQMP incorporates the latest scientific and technical information and planning assumptions, including the

[5] California Air Resources Board. April 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available at: http://www.arb.ca.gov/ch/handbook.pdf

[6] South Coast Air Quality Management District. 2017. *Final 2016 AQMP (December 2016).* Available at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp

latest applicable growth assumptions, transportation control measures and strategies, and updated emission inventory methodologies for various source categories.[7]

The 2016 AQMP showcases integrated strategies and measures to meet the following NAAQS:

- 2008 8-hour Ozone (75 ppb) by 2031
- 2012 Annual $PM_{2.5}$ (12 µg/m^3) by 2021 (moderate) and 2025 (serious)
- 2006 24-hour $PM_{2.5}$ (35 µg/m^3) by 2019
- 1997 8-hour Ozone (80 ppb) by 2023
- 1979 1-hour Ozone (120 ppb) by 2022

Los Angeles County Metropolitan Transportation Authority Green Construction Policy

On August 4, 2011, the Los Angeles County Metropolitan Transportation Authority (Metro) adopted the Green Construction Policy (GCP) and committed to using greener, less polluting construction equipment and vehicles and implementing best practices to reduce harmful diesel emissions on all Metro construction projects performed on Metro properties and rights of way. According to the SCAQMD, heavy duty diesel trucks and off-road construction equipment operating in Southern California are major sources of PM and NOx emissions and are also among the sources identified for the greatest emission reduction potential. The ultimate goal is to reduce harmful air emissions (particularly particulate matter and nitrogen oxides) while minimizing any significant impact to cost and schedule in any existing construction project.

Local

City of Los Angeles General Plan – Air Quality Element

The Air Quality Element of the City of Los Angeles General Plan was adopted in 1992. The Air Quality Element focuses on setting policies to guide the City in implementation of air quality improvement programs and strategies. Because mobile emissions contribute substantially to the total air emissions, the City is coordinating Congestion Management Plans with air quality and smart growth to achieve consistency across the plans. The Air Quality Element includes six main goals:

1) Good air quality and mobility in an environment of continued population growth and healthy economic structure.
2) Less reliance on single-occupant vehicles with fewer commute and nonwork trips.

[7] South Coast Air Quality Management District. 3 March 2017. *Final 2016 AQMP.* Available at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp

3) Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques.
4) Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.
5) Energy efficiency through land use and transportation planning, the use of renewable resources and less polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting.
6) Citizen awareness of the linkages between personal behavior and air pollution, and participation in efforts to reduce air pollution.

Central City Community Plan

There are five purpose related to air quality defined in the Central City Community Plan:[8]

- Create residential neighborhoods; while providing a variety of housing opportunities with compatible new housing
- Improve the function, design, and economic vitality of the commercial districts
- Preserve and enhance the positive characteristics of existing uses which provide the foundation for community identity, such as scale, height, bulk, setbacks, and appearance
- Maximize the development opportunities of the future rail transit system while minimizing adverse impacts
- Plan the remaining commercial and industrial development opportunity sites for needed job-producing uses that improve the economic and physical condition of the Central City Community.

By creating healthy communities where people can live, work, and play, it will effectively improve air quality as people reduce vehicle miles traveled and increase use of transit.

Central City North Community Plan Update

Adopted on December 15, 2000, the Central City North Community Plan Update establishes objectives and policies related to air quality:[9,10]

- Preserve and enhance the positive characteristics of existing residential neighborhoods while

[8] Central City Community Plan. Available at: http://planning.lacity.org/complan/pdf/CCYCPTXT.PDF

[9] Central City North Community Plan Update. 15 December 2000. Available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

[10] Central City North Community Plan Amendment: Mobility Plan 2035 Update. 7 September 2016. Available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

providing a variety of housing opportunities with compatible new housing
- Improve the function, design, and economic vitality of the commercial corridors
- Preserve and enhance the positive characteristics of existing uses which provide the foundation for community identity, such as scale, height, bulk, setbacks, and appearance
- Maximize the development opportunities of future transit systems while minimizing any adverse impacts
- Plan the remaining commercial and industrial development opportunity sites for needed job producing uses that will improve the economic and physical condition of the Central City North area

In terms of air quality, the Community Plan calls for transportation management strategies that encourage vehicular trip reduction to achieve regional air quality standards as set by the State and Federal Clean Air Acts.

Los Angeles Department of City Planning and the Downtown community are updating the Central City and the Central City North Community Plans as part of DTLA 2040. The updates are based upon the City's General Plan, focusing on land use, mobility, and long-term sustainable growth. DTLA 2040's core principles aim to anticipate growth through 2040, support/sustain Downtown's ongoing revitalization, reinforce Downtown's jobs orientation, grow/support the residential base, promote transit, bicycle, and pedestrian friendly environment, strengthen neighborhood character, and create linkages between districts.[11]

Alameda District Specific Plan

Adopted on June 18, 1996, the Alameda District Specific Plan's identifies four purposes related to air quality:[12]

- Provide regulatory controls and incentives for the systematic and incremental execution of that portion of the General Plan which relates to this geographic area and to provide for public needs, convenience and general welfare as the development of such area necessitates
- Assure orderly development and appropriate capacity of public facilities for the intensity and design of development by establishing general procedures for development within the Specific Plan area
- Provide continued and expanded development of the site both as a major transit hub for the region, and as a mixed-use development providing office, hotel, retail, entertainment, tourism,

[11] DTLA 2040 Planning a Dynamic Future for Downtown Los Angeles. Available at: http://www.dtla2040.org

[12] Alameda District Specific Plan. 1996. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF

residential and related uses within the Specific Plan area, in conformance with the goals and objectives of local and regional plans and policies

- To expand the economic base of the City, by providing additional employment opportunities and additional revenues to the region

The Alameda District Specific Plan sets environment impact thresholds that were quantified in the Specific Plan's EIR. If a project exceeds any of these thresholds, then additional environmental review is required. Peak daily emission thresholds are set for key pollutants from construction-related emissions. Air quality mitigation measures are also listed to limit emissions.

3.3.2 Affected Environment/Existing Conditions

South Coast Air Basin

The project site is located in the South Coast Air Basin (SCAB) and South Coast Air Quality Management District (SCAQMD) (Figure 3.3.2-1, *Air Basins within the Project Vicinity*, and Figure 3.3.2-2, *Air Districts in the Project Vicinity*). The SCAB incorporates approximately 12,000 square miles, consisting of Orange County and the urbanized areas of San Bernardino, Riverside, and Los Angeles Counties. In May 1996, the boundaries of the SCAB were changed by the CARB to include the Beaumont-Banning area. The distinctive climate of the SCAB is determined by its terrain and geographic location. The SCAB is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the southwest and high mountains around the perimeter. The general region lies in the semipermanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. The usually mild climatological pattern is interrupted occasionally by periods of extremely hot weather, winter storms, or Santa Ana winds. The SCAB is classified as a dry-hot desert climate.[13]

The vertical dispersion of air pollutants in the SCAB is hampered by the presence of persistent temperature inversions. High-pressure systems, such as the semipermanent high-pressure zone in which the SCAB is located, are characterized by an upper layer of dry air that warms as it descends, restricting the mobility of cooler marine-influenced air near the ground surface, and resulting in the formation of subsidence inversions. Such inversions restrict the vertical dispersion of air pollutants released into the marine layer and, together with strong sunlight, can produce worst-case conditions for the formation of photochemical smog. The basin-wide occurrence of inversions at 3,500 feet above sea level or less averages 191 days per year.[14]

[13] South Coast Air Quality Management District. April 1993. CEQA Air Quality Handbook, p. A8-1.

[14] South Coast Air Quality Management District. April 1993. CEQA Air Quality Handbook, p. A8-2.

The atmospheric pollution potential of an area is largely dependent on winds, atmospheric stability, solar radiation, and terrain. The combination of low wind speeds and low inversions produces the greatest concentration of air pollutants. On days without inversions, or on days of winds averaging over 15 miles per hour, smog potential is greatly reduced.[15]

Local Air Quality

The CARB-maintained air monitoring stations measure SCAB air pollutant levels. The monitoring station located closest to the project study area is the Los Angeles-North Main Street Monitoring Station, located at 1630 North Main Street in Los Angeles, which is approximately one mile northeast from the proposed project. The last three years of available data for these this locations include measurements for ozone, $PM_{2.5}$, PM_{10}, CO, and NO_2 (Table 3.3.2-1, *Summary of Ambient Air Quality in Project Area*). Table 3.3.2-1 shows pollutant levels, state and federal standards, and the number of recorded exceedances at the Los Angeles-North Main Street Monitoring Station from 2013 to 2015. Criteria pollutants ozone, PM10, and NO2 did not exceed the NAAQS from 2013 to 2015. The state standard for ozone was exceeded 0 to 3 times during this time period. The federal standard for PM2.5 was exceeded 1 to 7 times during this time period. The state standard for PM10 was exceeded 2 to 38 times during this time period. NO2 did not exceed the state standard from 2013 to 2015. Ozone and PM saw a spike in 2014 and declined in 2015.

[15] South Coast Air Quality Management District. April 1993. CEQA Air Quality Handbook.

Figure 3.3.2-1. Air Basins within the Project Vicinity

Figure 3.3.2-2. Air Districts within the Project Vicinity

TABLE 3.3.2-1
SUMMARY OF AMBIENT AIR QUALITY IN PROJECT AREA

Pollutant	Year		
	2013	2014	2015
Ozone			
Maximum 1-hr Concentration (ppm)	0.081	0.113	0.104
Days exceeding California Ambient Air Quality Standards (CAAQS) (0.09 parts per million [ppm])	0	3	2
Days exceeding National Ambient Air Quality Standards (NAAQS) (no standard)	0	0	0
Maximum 8-hour concentration (ppm)	0.069	0.094	0.074
Days exceeding CAAQS (0.07 ppm)	0	7	6
Days exceeding NAAQS (0.075 ppm - 2008 standard)	0	2	0
$PM_{2.5}$			
Maximum 24-hour concentration (micrograms per cubic meter [$\mu g/m^3$])	54.8	65.0	56.4
Days exceeding NAAQS (35 $\mu g/m^3$)	1	6	7
Annual arithmetic mean (AAM) ($\mu g/m^3$)	18.9	*	12.5
Does measured AAM exceed NAAQS (15 $\mu g/m^3$)?	Yes	*	Yes
Does measured AAM exceed CAAQS (12 $\mu g/m^3$)?	Yes	*	Yes
PM_{10}			
Maximum 24-hour concentration ($\mu g/m^3$)	74.5	86.8	72.0
Days exceeding NAAQS (150 $\mu g/m^3$)	0	0	0
Days exceeding CAAQS (50 $\mu g/m^3$)	20	38	2
AAM ($\mu g/m^3$)	35.3	30.2	*
Does measured AAM exceed CAAQS (20 $\mu g/m^3$)?	Yes	Yes	*
CO**			
Maximum 1-hour concentration (ppm)	5.6	5.4	4.3
Days exceeding NAAQS (35 ppm)	0	0	0
Days exceeding CAAQS (20 ppm)	0	0	0
Maximum 8-hour concentration (ppm)	3.4	3.8	3
Days exceeding NAAQS and CAAQS (9 ppm)	0	0	0
NO_2			
Maximum 1-hour concentration (ppm)	0.0903	0.0821	0.0791
Days exceeding NAAQs (0.100 ppm)	0	0	0
Days exceeding CAAQS (0.18 ppm)	0	0	0
AAM (ppm)	*	0.022	0.022
Does measured AAM exceed NAAQS (0.053 ppm)?	*	No	No
Does measured AAM exceed CAAQS (0.03 ppm)?	*	No	No
SO_2 (not measured at Los Angeles – North Main St. monitoring station)			
HS (not measured at Los Angeles – North Main St. monitoring station)			

NOTE: * Denotes insufficient data.

**CO data from: U.S. EPA. Accessed 27 July 2017. *Outdoor Air Quality Data*. Available at: https://www.epa.gov/outdoor-air-quality-data/air-quality-statistics-report

SOURCE: California Air Resources Board. Accessed 6 May 2016. *Top 4 Summary: Select Pollutant, Years, & Area.* Available at: http://www.arb.ca.gov/adam/topfour/topfour1.php

Attainment Status

The SCAB exceeds federal standards for ozone, respirable particulate matter (PM_{10}) and fine particulate matter ($PM_{2.5}$), and lead. The 1977 Clean Air Act Amendment, Section 107, requires the U.S. EPA to publish a list of geographic areas and their compliance with the National Ambient Air Quality Standards (NAAQS). Areas not in NAAQS compliance are deemed non-attainment areas and can be categorized into four designations of increasing severity: (1) moderate, (2) serious, (3) severe, and (4) extreme. Designations are based on a pollutant-by-pollutant basis. The EPA has classified the project area as an extreme nonattainment area for ozone and a moderate nonattainment area for $PM_{2.5}$ (Table 3.3.2-2, *Attainment Area Designations in Project Area*). Mobile sources, including cars, trucks, and off-road equipment, are the largest contributors to the formation of ozone, $PM_{2.5}$, diesel particulate matter, and greenhouse gas emissions in California. CARB developed a suite of mobile source programs and measures with the goal of reaching federal attainment for ozone by 2031. The proposed measures target on-road light duty vehicles, on-road heavy duty vehicles, off-road federal and international sources, off-road equipment, and consumer products.[16]

TABLE 3.3.2-2
ATTAINMENT AREA DESIGNATIONS IN PROJECT AREA

Criteria Pollutant	California State Standards	Federal Standards
8-hr Ozone (O_3) (2008)	Non-attainment	Extreme non-attainment
1-hr Nitrogen dioxide (NO_2) (1971)	Attainment	Attainment/maintenance
1-hr Carbon monoxide (CO) (1971)	Attainment	Attainment/maintenance
Respirable particulate matter (PM_{10}) (1987)	Non-attainment	Attainment/maintenance
Fine particulate matter ($PM_{2.5}$) (2012)	Non-attainment	Serious non-attainment
Sulfur dioxide (SO_2) (2010)	Attainment	Attainment
Lead (Pb) (2008)	Attainment	Non-attainment
Sulfates	Attainment	N/A
Hydrogen sulfide (HS)	Unclassified	N/A
Visibility reducing particles	Unclassified	N/A

SOURCE: U.S. Environmental Protection Agency. 1 February 2016. *U.S. EPA green book. Current nonattainment counties for all criteria pollutants*. Available at: https://www.epa.gov/green-book
California Air Resources Board. December 2015. *Area Designations Maps / State Ambient Air Quality Standards.* Available at: http://www.arb.ca.gov/desig/adm/adm.htm

California Ambient Air Quality Standards (CAAQS) are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. California has set standards for certain pollutants, such as

[16] California Air Resources Board. "Proposed 2016 State Strategy for the State Implementation Plan." May 17, 2016. Available at: https://www.arb.ca.gov/planning/sip/2016sip/2016statesip.pdf

particulate matter and ozone, which are more protective of public health than respective federal standards. The CARB has also set standards for some pollutants that are not addressed by federal standards such as visibility reducing particles and vinyl chloride. The CAAQS are generally more stringent than the NAAQS.

Description of Pollutants

Ozone, carbon monoxide, nitrogen oxides, particulate matter, sulfur dioxide, volatile organic compounds, lead, and toxic air contaminants were considered in the characterization of ambient air quality and the assessment of potential for direct, indirect, and cumulative impacts (see Appendix B to the Draft EIR, *Air Quality and Greenhouse Gas Emissions Technical Report*).

Sensitive Receptors

Land uses identified to be sensitive receptors by the CARB in the Air Quality and Land Use Handbook include residences, schools, day care centers, playgrounds, and medical facilities. Sensitive land uses are reviewed with special concern since vulnerable populations including children, pregnant women, the elderly, and people with existing health problems are more sensitive to air pollution. Adjacent to the proposed project area, the Mozaic at Union Station Apartments has been identified as the nearest residential sensitive receptor because it is a location where people spend large amounts of time. Also adjacent to the proposed project area is the La Petite Academy of Los Angeles. La Petite Academy of Los Angeles is an educational daycare center located within First 5 LA and is considered a sensitive receptor for air quality.

Odors

Objectionable odors are typically generated during the construction phase from diesel emissions from off-road construction equipment or from motor vehicles. As a transit hub, Los Angeles Union Station has a constant stream of bus and rail activity. Most of the Metro buses are fueled by compressed natural gas (CNG), and some trains are powered by electricity. Gasoline and diesel passenger vehicles that drive to and from the project study area are a potential source of objectionable odors.

3.3.3 Environmental Impacts/Environmental Consequences

The air quality emissions were calculated using CalEEMod 2016.3.1. CalEEMod, California Emissions Estimator Model, is the standard model used statewide to calculate land use emissions during construction and operation. The model calculates direct emissions from construction equipment and vehicle use as well as indirect emissions from energy use, water use, and vegetation. The construction scenario and assumptions are defined by construction phase and activity (see Section 4.3, *Construction Scenario and Assumptions*, of Appendix B, *Air Quality and Greenhouse Gas Emissions Technical Report*).

The LOS and average delay from Section 3.17, Transportation and Traffic, and Appendix H, Traffic Data, of the Draft EIR, by Fehr and Peers was used to determine air quality conformity and to determine operational emissions.

The State CEQA Guidelines recommend the consideration of five questions when addressing the potential for significant impacts to air quality. Would the proposed project:

(a) Conflict with or obstruct implementation of the applicable air quality plan?

The proposed project would result in less than significant impacts to air quality in regard to conflicting with or obstructing implementation of the applicable air quality plan. The 2016 AQMP by SCAQMD was approved in March 2017; however, the Notice of Preparation for the proposed project was released on December 22, 2016. Therefore, the approved 2012 AQMP is the applicable air quality plan. The purpose of the 2012 AQMP is to bring the South Coast Air Basin into compliance with the federal 24-hour $PM_{2.5}$ air quality standard and to provide an update to the Basin's progress towards meeting the federal 8-hour ozone standards.[17] As the Alameda Street and Los Angeles Street Improvements portions of the proposed project are listed in the SCAG Federal Transportation Improvement Program (FTIP), they are consistent with the 2016 SCAG RTP/SCS. The remaining Los Angeles street improvements and forecourt area improvements would be minor by comparison and not result in any additional vehicle miles traveled (VMT) or generate substantial emissions. For air quality conformity with Caltrans, the proposed project is listed as a transportation control measure in the SCAG FTIP, meaning it has been identified as a project that supports efforts to attain federal and state air quality standards. Despite an anticipated worsening of LOS at certain study intersections as a result of the proposed project, the proposed project is intended to encourage mode shift to more active modes of transportation and to reduce vehicle miles traveled, which is aligned with the goals of the SCAG 2016–2040 RTP/SCS. This focus on more complete streets would help reduce the region's contribution to $PM_{2.5}$ and ozone by reducing vehicle emissions, which is aligned with the goals in the 2012 AQMP. The traffic modelling documented in Section 3.17 of this EIR concludes that intersection level of service (LOS) will worsen at several intersections as a result of the roadway capacity repurposing associated with the implementation of the project. However, the analysis is conservative, because it assumes that vehicle trips will not shift to other travel modes, to alternative routes, or shift time periods as a result of worsened intersection level of service. This ensures that the maximum potential traffic impact envelope is identified in the EIR, but it's likely to overstate the effects to intersection operating conditions, because some of these shifts in mode, route, or time period will likely occur. As a key first/last mile connection, the proposed project supports broader regional

[17] South Coast Air Quality Management District. February 2013. 2012 Air Quality Management Plan. Available at: http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2012-air-quality-management-plan/final-2012-aqmp-(february-2013)/main-document-final-2012.pdf

transportation and air quality goals that collectively will help to reduce regional air quality impacts. Therefore, the proposed project would not conflict with the goals in the 2012 AQMP or SCAG 2016 RTP/SCS to reduce transportation related emissions.

The proposed project is also in alignment with the policies of the Central City North Community Plan and the Central City Community Plan related to air quality. The Central City North Community Plan adheres to the Los Angeles Citywide General Plan Framework Transportation Improvement and Mitigation Program (TIMP) as part of its Transportation Demand Management Program (TDM). The purpose of the TDM is to encourage people to use more efficient modes of transportation to reduce emissions. Through the Alameda Street improvements, the proposed project incorporates more pedestrian and bicycle access to LAUS, a hub for transit services in the Los Angeles region. A grand consolidated pedestrian crossing improves connectivity between the El Pueblo de Los Angeles and LAUS. A small section of the project area on Los Angeles Street lies within the Central City Community Plan. Similar to the Central City North Community Plan, the proposed project would not conflict with the Central City Community Plan for any air quality issues as the proposed project promotes multi-modal access, provides a Civic Plaza as open space, and improves pedestrian and bicycle circulation. The proposed project achieves this goal by making the streetscape more pedestrian friendly to encourage people out of their cars and onto transit, bicycles, and travel by foot.

Transportation Conformity

A transportation conformity determination is required for approval, funding, or implementation of FWHA/FTA projects. Once built, the proposed project would not increase the number of vehicles in the vicinity or VMT because there is no development associated with the project. The proposed project would simply accommodate existing demand and therefore not be considered a destination. As evaluated in Section 3.17 *Transportation and Traffic*, Figure 3.17-7, three intersections located in the project study area would experience worse level of service (LOS) and average delay. Intersection #17 (Alameda Street and Cesar E. Chavez) would have its worse delay at the PM Peak Hour, while Intersection #19 (Alameda Street and Los Angeles Street) and #24 (Alameda Street and Arcadia Street) would have its worse delay in the AM Peak Hour. For PM Peak Hour, Intersection #17 at Alameda/Cesar Chavez would worsen from an existing LOS C in 2016 (29-second delay) to LOS D in 2029 (45-second delay), experiencing 7 seconds' delay from the proposed project and an additional 9 seconds' delay from cumulative impacts. For AM Peak Hour, Intersection #19 at Alameda/Los Angeles St. would worsen from an existing LOS B (15-second delay) to LOS E (62-second delay), experiencing 26 seconds' delay from the proposed project and an additional 21 seconds' delay from cumulative impacts. For AM Peak Hour, Intersection #24 at Alameda/Arcadia would worsen from an existing LOS E (78-second delay) to LOS F (120+ second delay), experiencing 8+ seconds' delay from the proposed project and an additional 34 seconds' delay from cumulative impacts. Despite potential localized impacts, the proposed project, as the Alameda Street improvements only, is listed in the FTIP by SCAG as a transportation control measure and would have an overall benefit to air quality by providing pedestrian and biking facilities as well as more accessible transit options. It is anticipated that the proposed project would be exempt from

regional emissions analysis pursuant to Table 3 of §93.127 as an intersection channelization project.[18] Therefore, the proposed project would result in less than significant impacts, and no mitigation would be required.

(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The proposed project would result in less than significant impacts to air quality related to the potential to violate any air quality standard or contribute substantially to an existing or projected air quality violation during construction, operation, and maintenance. In order to meet sustainability goals, the proposed project would use performance-based best management practices which may include, but are not limited to, porous paving, photovoltaic/piezoelectric components in the forecourt, shade trees to reduce the urban heat island effect, bioswales, recycled water for the central water feature, as well as water efficient and energy efficient fixtures in the small transit-serving building.

Construction

Construction emissions were calculated using CalEEMod 2016.3.1 per the construction scenario and assumptions. These emissions are compared to the SCAQMD significance thresholds in Table 3.3.3-1, *Unmitigated Peak Daily Construction Emissions (lb/day)*. Air quality thresholds are set to protect public health. All construction work would also adhere to the Metro Green Construction Policy.

TABLE 3.3.3-1
UNMITIGATED PEAK DAILY CONSTRUCTION EMISSIONS (LB/DAY)

	VOC	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Construction Emissions (lb/day)	3.11	27.28	20.56	0.04	6.58	4.18
SCAQMD (lb/day) Significance Threshold[19]	75	100	550	150	150	55
Exceeds threshold?	No	No	No	No	No	No

SOURCE*:* Appendix A, *CalEEMod_Summer Report,* of the *Air Quality and Greenhouse Gas Emissions Technical Report* (Appendix B to the Draft EIR).

Operation

The proposed project is a bike and pedestrian infrastructure project with a roadway reconfiguration on Alameda Street and is not considered growth-inducing. As the proposed project is located in an

[18] Cornell Law School. *40 CFR 93.127 - Projects Exempt from Regional Emissions Analyses.* Available at: https://www.law.cornell.edu/cfr/text/40/93.127

[19] SCAQMD. March 2015. SCAQMD Air Quality Significance Thresholds. Available at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf

urbanized area directly adjacent and surrounded by multiple transit options (bus, light rail, heavy rail), it would be part of a high-quality transit corridor. The proposed project would provide more open space through the civic area, but is not a destination in itself, as it is a component of LAUS and would not result in additional VMT. For these reasons, the VMT that would be generated by the proposed project are assumed to be zero. Therefore, no operational mobile emissions were calculated.

The proposed project would also eliminate the 60-space parking lot, which would reduce the amount of cold start emissions from cars. The forecourt area would not create any direct emissions through operation of the outdoor lighting water feature, or the small transit-serving building. Indirect emissions would be minimal as the operational usage of the forecourt area would require limited electricity and water usage to power the water feature and outdoor landscaping and safety lights, as well as the lighting and water fixtures in the small transit-serving building. The proposed project's elements would result in 6.5 lb/day of VOCs, of which the small transit-serving building would not substantially contribute. This is well below the threshold of 55 lb/day per the SCAQMD significance thresholds (Appendix B, *Air Quality and Greenhouse Gas Emissions Technical Report*). The proposed project would also provide a net 49 new trees in addition to the 80 existing trees that would remain on site for a total of 129 trees. These trees would provide a benefit to air quality since they would sequester carbon dioxide from the air.

Maintenance

The proposed project would require limited maintenance. The landscaping and small transit-serving building would require minimal upkeep. Maintenance activities typically do not cause substantial emissions and would be outweighed by the benefits resulting from the project's sustainability goals, which may include, but are not limited to, additional trees, bioswales, pedestrian/bicycle facilities, and reduction of vehicles in the project area as people shift to alternative modes of transportation.

Carbon Monoxide Hot Spot Analysis

As shown in the *Traffic Study*, the LOS and average delay would worsen for all three intersections within the project study area. This is further worsened by development projects in the project vicinity area, which are considered in the cumulative impacts. However, the proposed project would screen out in the CO Protocol[20] at Section 4, Level 7 in the CO Protocol's Figure 4, *Local CO Analysis*. To determine if a project worsens air quality (Section 4.7.1 of the CO Protocol), the project shall not increase overall traffic volumes, shall not increase the number of diesel vehicles on a permanent basis, shall not increase number of vehicles operating in cold start mode, and shall not worsen traffic flow. Because the

[20] California Department of Transportation. "Transportation Project-Level Carbon Monoxide Protocol." December 1997. Available at: http://www.dot.ca.gov/hq/env/air/documents/COProtocol_searchable.pdf

proposed project would worsen traffic flow (LOS), the proposed project advances to section 4.7.2 of the CO Protocol and is further evaluated for proximity to receptors, roadway geometry, and other geographical and ambient air quality characteristics. With the proposed project, receptors such as La Petite Academy would be farther from the roadway because of the vehicle lane reduction, and the number of vehicles operating in cold start mode would be reduced with the removal of the short-term parking lot. The traffic lane volumes and percentage of heavy duty gas trucks would not be greater as a result of the project. While average delay is shown to increase at certain study intersections, as evaluated in Section 3.17, *Transportation and Traffic*, of the Draft EIR, the traffic analysis is conservative, because it assumes that vehicle trips will not shift to other travel modes, to alternative routes, or shift time periods as a result of worsened intersection level of service. This ensures that the maximum potential traffic impact envelope is identified in the EIR, but it's likely to overstate the effects to intersection operating conditions, because some of these shifts in mode, route, or time period will likely occur. As a key first/last mile connection, the proposed project during operation in the long term supports broader regional transportation and air quality goals to reduce pollutant concentrations at the project site. It is further evaluated for proximity to receptors, roadway geometry, and other geographical and ambient air quality characteristics. As shown in the CalEEMod modeling, the CO generated from the project during construction would also be less than significant (Appendix B, *Air Quality and Greenhouse Gas Emissions Technical Report*). Because the proposed project will not result in higher CO concentrations than those existing within the region at the time of attainment demonstration, the project is determined to be satisfactory for CO with no further analysis needed. The proposed project screens out in Section 4.7.2 of the CO Protocol. Therefore, the proposed project would not have the potential to cause or worsen a violation of the NAAQS for CO.

PM Hot Spot Analysis

The proposed project is not considered a project of air quality concern for PM_{10} and $PM_{2.5}$ because it would not fulfill any of the criteria listed in 40 CFR 93.123(b)(1):

- New or expanded highway projects that have a significant number of or significant increase in diesel vehicles
- Projects affecting intersections at Level of Service (LOS) D, E, or F with a significant number of diesel vehicles or those that will change to LOS D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project
- New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location
- Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location
- Projects in or affecting locations, areas, or categories of sites that are identified in the PM2.5-or PM10-applicable implementation plan or implementation

Therefore, the proposed project would result in less than significant impacts to air quality in regard to violating any air quality standard or contributing substantially to an existing or projected air quality violation, and no mitigation would be required.

(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The proposed project would result in a less than significant impact to air quality related to a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment. The proposed project is located within the SCAB, which is in a federal non-attainment area for 1-hour ozone, 8-hour ozone, and $PM_{2.5}$ and a state level non-attainment area for 1-hour ozone, 8-hour ozone, PM_{10}, and $PM_{2.5}$. Sixty-three development projects are located in the vicinity of the proposed project, including Metro projects, residential development, commercial development, bus stop improvements, active transportation corridors, mixed-use projects, and more. However, the construction schedule for these projects would be staggered, and the emissions would be temporary and intermittent in nature as the projects move through the various construction stages. None of these projects would create significant long-term operational emissions as deduced from the nature of these projects not being stationary sources for industry or any large scale utility projects. In fact, many of these projects would result in a benefit to air quality as they provide better transit services, walking and biking facilities, transit-oriented development, and higher density areas in an urban location, which would reduce VMT consistent with the 2016 SCAG RTP/SCS. Therefore, the proposed project would result in a less than significant impact to a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment, and no mitigation would be required.

(d) Expose sensitive receptors to substantial pollutant concentrations?

The proposed project would result in a less than significant impact to air quality in regard to exposing sensitive receptors to substantial pollutant concentrations. The proposed project would reduce the number of vehicle travel lanes along Alameda Street and add a forecourt and esplanade. The proposed project would not cause additional vehicle trips and therefore would not generate substantial pollutant concentrations. These activities would not generate substantial pollutant concentrations as there would be no additional vehicle trips as a result of the proposed project. Furthermore, the removal of the 60-space surface parking lot would reduce cold start emissions from vehicles near sensitive receptors. The relocation of driveways into LAUS and the addition of curbside drop offs on Alameda Street would likely reduce the number of vehicles from turning into LAUS from Alameda Street and direct traffic away from the sensitive receptors. The nearest sensitive receptor to the project study area is the La Petite Academy, a daycare located in the First 5 LA building. First 5 LA is located adjacent to the project boundary. The Mozaic Apartments are the closest residence and are located adjacent to the project boundary (Figure 3.3.3-1, *Sensitive Receptors within a Half-Mile Radius of the Project Site*). While construction would require off-road diesel equipment and hauling trucks to be used, these impacts are

short term and intermittent in nature. As evaluated in the CalEEMod run, both construction and operational impacts to air quality would be less than significant. Therefore, impacts would be less than significant, and no mitigation would be required.

(e) Create objectionable odors affecting a substantial number of people?

The proposed project would result in less than significant impacts to air quality in regard to exposing a substantial number of people to objectionable odors. According to the SCAQMD's CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The nature of the project is to create a more pedestrian- and bike-friendly entrance to LAUS that would reduce vehicle traffic in the area as people shift to other more sustainable modes of transportation. This type of project is not a typical source of odors. The proposed project would not incorporate any uses identified by the SCAQMD as being associated with odors, or any comparable use that would be expected to generate nuisance odors. The vehicle lane reduction on Alameda Street would cause more idling and delay of vehicles in the short term that would result in increased emissions, but this impact would be less than significant as people recognize that other active transportation modes are available and VMT is reduced. The traffic modelling documented in Section 3.17, *Transportation and Traffic,* of the Draft EIR concludes that intersection LOS will worsen at several intersections as a result of the roadway capacity repurposing associated with the implementation of the project. However, the analysis is conservative, because it assumes that vehicle trips will not shift to other travel modes, to alternative routes, or shift time periods as a result of worsened intersection level of service. This ensures that the maximum potential traffic impact envelope is identified in the EIR, but it's likely to overstate the effects to intersection operating conditions, because some of these shifts in mode, route, or time period will likely occur. As a key first/last mile connection, the project supports broader regional transportation and air quality goals that collectively will help to reduce regional air quality impacts. As a result, the proposed project would result in a less than significant impact to creating objectionable odors affecting a substantial number of people.

3.3.4 Cumulative Impacts

(a) Conflict with or obstruct implementation of the applicable air quality plan?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding a conflict with an applicable air quality plan. The other development projects in the area would be developed in compliance with the Air Quality Management Plan and SCAG RTP/SCS. Related projects would also be built in a high-quality transit area that would reduce VMT. Therefore, impacts would be less than significant, and no mitigation would be required.

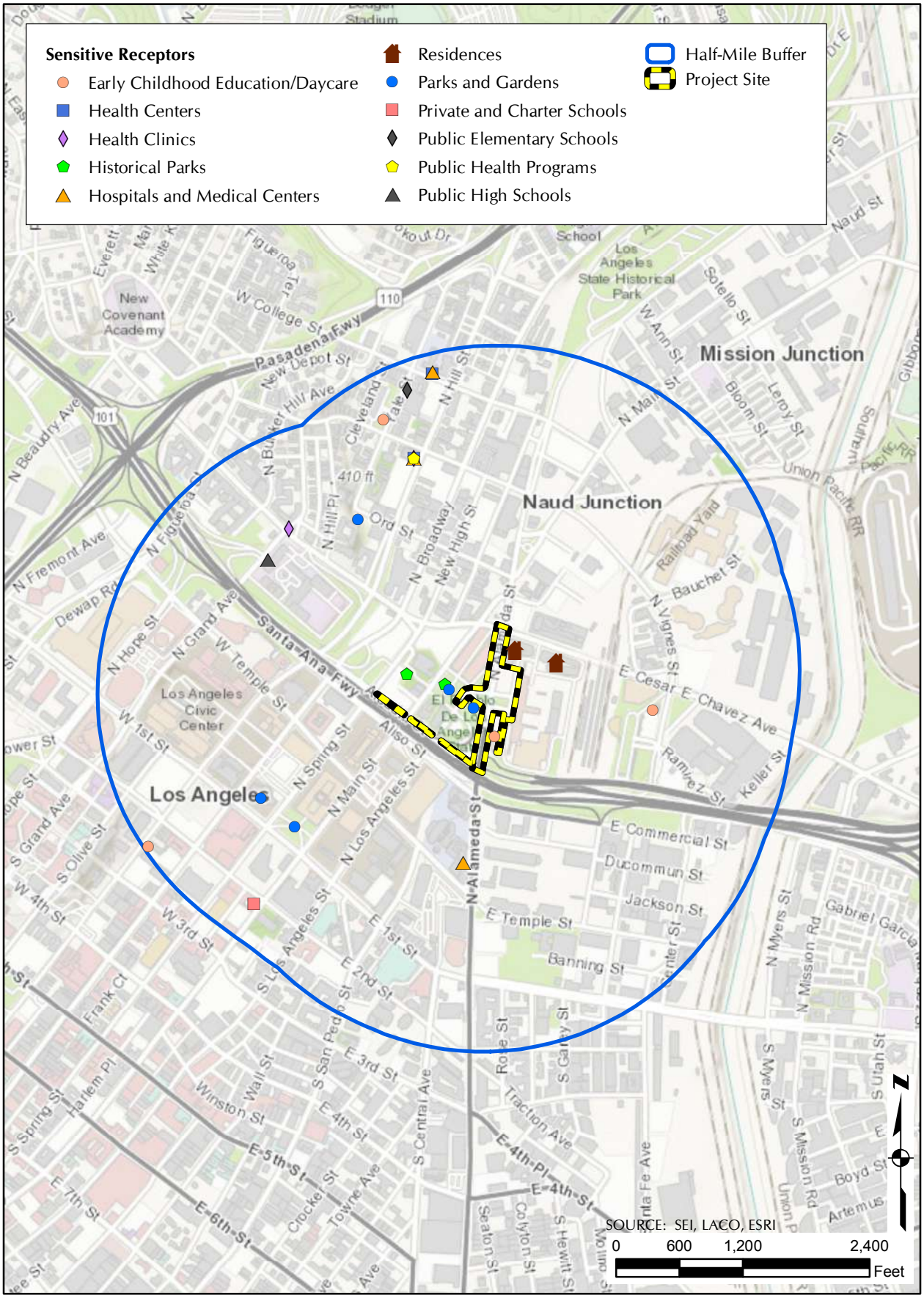


Figure 3.3.3-1. Sensitive Receptors within a Half-Mile Radius of the Project Vicinity

(b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding a violation to any air quality standard or contribute substantially to an existing or projected air quality violation. Sixty-three (63) development projects are located in the vicinity of the proposed project, including Metro projects, residential development, commercial development, bus stop improvements, active transportation corridors, mixed-use projects, and more. Due to the temporary and intermittent nature of construction and because none of these cumulative projects are expected to produce long term operational emissions from the nature of the projects, the cumulative impact to air quality would be less than significant regarding a violation to any air quality standard, and no mitigation would be required.

(c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Many of the related projects would result in a benefit to air quality in the long term as they provide better transit services, walking and biking facilities, transit-oriented development, and higher density areas in an urban location, which would reduce VMT. Construction impacts would be less than significant as construction of these related projects would be staggered, intermittent, and temporary in nature. Therefore, impacts would be less than significant, and no mitigation would be required.

(d) Expose sensitive receptors to substantial pollutant concentrations?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding exposure of sensitive receptors to substantial pollutant concentrations. Because the related projects occur in a dense, urban area, there would be impacts to sensitive receptors such as residences and schools; however, construction would be staggered, intermittent, and temporary in nature. In the long term, there would be a benefit to these sensitive receptors, as the proposed project would develop a more walkable community and reduce tailpipe emissions in the neighborhoods. Therefore, impacts would be less than significant, and no mitigation would be required.

(e) Create objectionable odors affecting a substantial number of people?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding the creation of objectionable odors affecting a substantial number of people. Odors would be generated from diesel equipment and trucks used during construction. Construction impacts would be less than significant as construction of these related projects would be staggered, intermittent,

and temporary in nature. For operation, the development and transit related projects are not expected to be typical sources of odors. Therefore, impacts would be less than significant, and no mitigation would be required.

3.3.5 Mitigation Measures

No mitigation would be required.

3.3.6 Level of Significance after Mitigation

Impacts would be less than significant.

3.4 Greenhouse Gas Emissions

This section of the Environmental Impact Report (EIR) analyzes potential impacts to greenhouse gas (GHG) emissions from construction, operation, and maintenance of the proposed Forecourt and Esplanade Improvements Project (proposed project). The analysis of GHG emissions consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project study area, anticipated impacts (direct, indirect, and cumulative), mitigation measures and level of significance after mitigation, and alternatives to the proposed project.

GHG emissions were evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines), executive orders with regard to reducing GHG emissions, the California Air Resources Board (CARB) Climate Change Scoping Plan, and local climate action plans.

3.4.1 Regulatory Setting

Federal

U.S. EPA Findings

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHG under section 202(a) of the Clean Air Act, as follows:

- "Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases - CO2, CH4, N2O, HFCs, PFCs, and SF6 - in the atmosphere threaten the public health and welfare of current and future generations."
- "Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare."

"These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing the [US]EPA's proposed greenhouse gas emission standards for light-duty vehicles."

The GHG endangerment finding is currently under review by the Trump administration and EPA Administrator Pruitt.[1]

[1] Environmental Protection Agency. Accessed 24 May 2017. Available at: https://www.epa.gov/sites/production/files/signpost/cc.html

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (42 U.S. Code [USC] 17001) includes several key provisions that will increase energy efficiency and the availability of renewable energy, which will reduce GHG emissions as a result. First, the Act sets a Renewable Fuel Standard that requires fuel producers to use at least 36 billion gallons of biofuel by 2022. Second, it increased Corporate Average Fuel Economy (CAFE) Standards to require a minimum average fuel economy of 35 miles per gallon for the combined fleet of cars and light trucks by 2020. Third, the Act includes a variety of new standards for lighting and for residential and commercial appliance equipment. The equipment includes residential refrigerators, freezers, refrigerator-freezers, metal halide lamps, and commercial walk-in coolers and freezers.[2]

Greenhouse Gas Reporting Program (GHGRP)

The EPA adopted the GHGRP (40 Code of Federal Regulations [CFR] Part 98), a mandatory GHG reporting rule in September 2009. The rule requires suppliers of fossil fuels or entities that emit industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions to submit annual reports to the EPA beginning in 2011 (covering the 2010 calendar year emission). Vehicle and engine manufacturers were required to begin reporting GHG emissions for model year 2011. In January 2012, EPA made the first year of GHGRP reporting data available to the public through its interactive Data Publication Tool, called Facility Level Information on Greenhouse Gases Tool (FLIGHT), EPA will continue to update the tool and release additional data each reporting year.[3]

Light-Duty Vehicle GHG Emissions Standards and Corporate Average Fuel Economy Standards

On September 15, 2009, the National Highway Traffic Safety Administration (NHTSA) and EPA announced a proposed joint rule that would explicitly tie fuel economy to GHG emissions reductions requirements. The proposed new CAFE Standards would cover automobiles for model years 2012 through 2016, and would require passenger cars and light trucks to meet a combined, per mile, carbon dioxide emissions level. It is estimated that by 2016, this GHG emissions limit could equate to an overall light-duty vehicle fleet average fuel economy of as much as 35.5 miles per gallon. The proposed standards would require model year 2016 vehicles to meet an estimated combined average emission level of 250 grams of carbon dioxide per mile under EPA's GHG program. On November 16, 2011, EPA and NHTSA issued a joint proposal to extend the national program of harmonized GHG and fuel economy standards to model year 2017 through 2025 passenger vehicles. In August 2012, President

[2] U.S. Environmental Protection Agency. Accessed 14 October 2015. *Summary of the Energy Independence and Security Act*. Available at: http://www2.epa.gov/laws-regulations/summary-energy-independence-and-security-act

[3] U.S. Environmental Protection Agency. Accessed 14 October 2015.*Greenhouse Gas Reporting Program.* Available at: http://www2.epa.gov/ghgreporting

Obama finalized standards that will increase fuel economy to the equivalent of 54.5 mpg for cars and light-duty trucks by Model Year 2025.

On July 18, 2016, the EPA and CARB issued a Draft Technical Assessment Report for the fuel economy standards for passenger vehicles and light trucks MY 2022-2025. As of 2016, there are over 100 car, SUV, and pick-up truck versions on the market that already meet 2020 or later standards.

Paris Climate Agreement

On June 1, 2017, President Trump withdrew the United States from the Paris Agreement.[4] The Paris Agreement was negotiated within the United Nations Framework Convention on Climate Change in 2015 to reduce GHG emissions internationally. The goal of the Paris Agreement was to keep the global temperature rise this century to below 2 degrees Celsius above pre-industrial standards, with efforts to limit temperature increase even further to 1.5 degrees Celsius. The Paris Agreement became effective on November 4, 2016. As of October 5, 2016, 155 of 197 parties had ratified the Paris Agreement.[5]

State

Global Warming Solutions Act of 2006

In September 2006, Governor Arnold Schwarzenegger signed the California Global Warming Solutions Act of 2006, also known as Assembly Bill (AB) 32 (Núñez, Chapter 488, Statutes of 2006), into law. AB 32 focuses on reducing GHG emissions in California and requires the CARB to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020. To achieve this goal, AB 32 mandates that the CARB establish a quantified emissions cap; institute a schedule to meet the cap; implement regulations to reduce statewide GHG emissions from stationary sources; and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. Because the intent of AB 32 is to limit 2020 emissions to the equivalent of 1990, it is expected that the regulations would affect many existing sources of GHG emissions and not just new general development projects. SB 1368, a companion bill to AB 32, requires the California Public Utilities Commission and the California Energy Commission to establish GHG emission performance standards for the generation of electricity. These standards will also apply to power that is generated outside of California and imported into the state.

[4] United States Environmental Protection Agency. 1 June 2017. *Administrator Scott Pruitt Speech on Paris Accord, As Prepared.* Available at: https://www.epa.gov/speeches/administrator-scott-pruitt-speech-paris-accord-prepared

[5] United Nations Framework Convention on Climate Change. 27 July 2017. *The Paris Agreement*. Available at: http://unfccc.int/paris_agreement/items/9485.php

AB 32 charges CARB with the responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. On June 1, 2007, CARB adopted three discrete early action measures to reduce GHG emissions. These measures involved complying with a low carbon fuel standard, reducing refrigerant loss from motor vehicle air conditioning maintenance, and increasing methane capture from landfills.[6] On October 25, 2007, CARB tripled the set of previously approved early action measures. The approved measures include improving truck efficiency (i.e., reducing aerodynamic drag), electrifying port equipment, reducing PFCs from the semiconductor industry, reducing propellants in consumer products, promoting proper tire inflation in vehicles, and reducing sulfur hexafluoride emission from the non-electricity sector. CARB has determined that the total statewide aggregated GHG 1990 emissions level and 2020 emissions limit is 427 million metric tons of carbon dioxide equivalent ($MMTCO_{2e}$). The 2020 target reductions are currently estimated to be 174 $MMTCO_{2e}$.

The CARB AB 32 Scoping Plan contains the main strategies to achieve the 2020 emissions cap. The Scoping Plan was developed by the CARB with input from the Climate Action Team (CAT) and proposes a comprehensive set of actions designed to reduce overall carbon emissions in California, improve the environment, and reduce oil dependency. The GHG reduction strategies contained in the Scoping Plan include direct regulations, alternative compliance mechanisms, monetary and nonmonetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. Key approaches for reducing GHG emissions to 1990 levels by 2020 include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards
- Achieving a statewide renewable electricity standard of 33 percent
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets
- Adopting and implementing measures to reduce transportation sector emissions, including California's

CARB has also developed the GHG mandatory reporting regulation, which required reporting beginning on January 1, 2008, pursuant to requirements of AB 32. The regulations require reporting for certain types of facilities that make up the bulk of the stationary source emissions in California. The regulation language identifies major facilities as those that generate more than 25,000 metric tons of carbon dioxide equivalent ($MTCO_2$) per year. Cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, and hydrogen plants and other stationary combustion

[6] California Air Resources Board. 20 April 2007. *Proposed Early Action Measures to Mitigate Climate Change in California*.

sources that emit more than 25,000 $MTCO_2$ per year make up 94 percent of the point source CO_2 emissions in California.

Executive Order S-3-05 GHG Reduction Targets (2005)

Pursuant to AB 32, on June 1, 2005, Executive Order (EO) S-3-05 set the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels. The EO establishes state GHG emission targets of 1990 levels by 2020 (the same as AB 32) and 80 percent below 1990 levels by 2050.[7] It calls for the Secretary of Cal/EPA to be responsible for coordination of state agencies and progress reporting. A recent California Energy Commission report concludes, however, that the primary strategies to achieve this target should be major "decarbonization" of electricity supplies and fuels, and major improvements in energy efficiency.[8]

In response to the EO, the Secretary of the Cal/EPA created the CAT. California's CAT originated as a coordinating council organized by the Secretary for Environmental Protection. It included the Secretaries of the Natural Resources Agency and the Department of Food and Agriculture and the Chairs of the CARB, California Energy Commission, and Public Utilities Commission. The original council was an informal collaboration between the agencies to develop potential mechanisms for reductions in GHG emissions in the state. The council was given formal recognition in EO S-3-05 and became the CAT.

The original mandate for the CAT was to develop proposed measures to meet the emission reduction targets set forth in the executive order. The CAT has since expanded and currently has members from 18 state agencies and departments. The CAT also has 10 working groups that coordinate policies among their members. The working groups and their major areas of focus are:

- Agriculture: Focusing on opportunities for agriculture to reduce GHG emissions through efficiency improvements and alternative energy projects, while adapting agricultural systems to climate change
- Biodiversity: Designing policies to protect species and natural habitats from the effects of climate change
- Energy: Reducing GHG emissions through extensive energy efficiency policies and renewable energy generation

[7] CEQA review related to the EO is currently being considered before the California Supreme Court in *Cleveland National Forest Association et al v. San Diego Association of Governments*, 231 Cal.App. 4th 1056. Considering this pending litigation, and to fulfill the related CEQA requirements for the PEIR to serve as a full-disclosure document, EO S-03-05 and B-30-15 have been included in this regulatory framework, and the PEIR addresses consistency of the RTP/SCS in relation to the GHG reduction targets set forth under such executive orders.

[8] California Energy Commission. May 2011. *California's Energy Future – The View to 2050*.

- Forestry: Coupling GHG mitigation efforts with climate change adaptation related to forest preservation and resilience, waste to energy programs and forest offset protocols
- Land Use and Infrastructure: Linking land use and infrastructure planning to efforts to reduce GHG from vehicles and adaptation to changing climatic conditions
- Oceans and Coastal: Evaluating the effects sea level rise and changes in coastal storm patterns on human and natural systems in California
- Public Health: Evaluating the effects of GHG mitigation policies on public health and adapting public health systems to cope with changing climatic conditions
- Research: Coordinating research concerning impacts of and responses to climate change in California
- State Government: Evaluating and implementing strategies to reduce GHG emissions resulting from state government operations
- Water: Reducing GHG impacts associated with the state's water systems and exploring strategies to protect water distribution and flood protection infrastructure

The CAT is responsible for preparing reports that summarize the state's progress in reducing GHG emissions. The most recent CAT Report was published in December 2010. The CAT Report discusses mitigation and adaptation strategies, state research programs, policy development, and future efforts.

SB 32 / AB 197

Senate Bill (SB) 32 was signed into law by Governor Jerry Brown on September 8, 2016. SB 32 requires California to reduce GHG emissions by 40 percent below 1990 levels by 2030. SB 32 is a continuation of AB 32, signed in 2006, which set a GHG reduction target of reducing GHG emissions to 1990 levels by 2020. The passing of SB 32 is tied to another bill, AB 197. AB 197 mandates the CARB to prioritize disadvantaged communities in climate change related regulations and to prepare a scoping plan that uses the maximum technologically feasible and cost-effective reductions in GHG emissions.

First Update to the Climate Change Scoping Plan (May 2014)

This First Update to California's Climate Change Scoping Plan (Update) was developed by the CARB in collaboration with the Climate Action Team and reflects the input and expertise of a range of state and local government agencies. The Update reflects public input and recommendations from business, environmental, environmental justice, and community-based organizations provided in response to the release of prior drafts of the Update, a Discussion Draft in October 2013 and a draft Proposed Update in February 2014.

This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The First Update includes recommendations for establishing a mid-term emissions limit that aligns with the State's long-term goal of an emissions limit 80 percent below 1990 levels by 2050 and sector-specific discussions covering issues, technologies, needs, and ongoing State activities to significantly reduce emissions throughout California's economy through 2050. The

focus areas include energy, transportation, agriculture, water, waste management, and natural and working lands.[9] With respect to the transportation sector, California has outlined several steps in the State's ZEV Action Plan to further support the market and accelerate its growth. Committed implementation of the actions described in the plan will help meet Governor Brown's 2012 EO B-16-2012, which—in addition to establishing a more specific 2050 GHG target for the transportation sector of 80 percent from 1990 levels—called for 1.5 million ZEVs on California's roadways by 2025.

Achieving such an aggressive 2050 target will require innovation and unprecedented advancements in energy demand and supply.[10] Emissions from 2020 to 2050 will have to decline at more than twice the rate of that needed to reach the 2020 statewide emissions limit. In addition to climate objectives, California also must meet federal clean air standards. Emissions of criteria air pollutants, including ozone precursors (primarily oxides of nitrogen, or NOx) and particulate matter, must be reduced by, a currently estimated, 90 percent by 2032 to comply with federal air quality standards. The scope and scale of emission reductions necessary to improve air quality is similar to that needed to meet long-term climate targets. Achieving both objectives will align programs and investments to leverage limited resources for maximum benefit.

Sustainable Communities and Climate Protection Act of 2008 (SB 375, Chapter 728, Statutes of 2008)

The Sustainable Communities and Climate Protection Act of 2008 SB 375 (Steinberg, Chapter 728, Statutes of 2008), adopted in September 30, 2008, provides an additional means for achieving AB 32 GHG emissions reduction goals. As part of the state's overall strategy to reduce GHG emissions as set forth by Executive Orders S-03-05 and B-30-15 and AB 52, SB 375 seeks to coordinate land use strategies with transportation planning. By coordinating these planning efforts, it is envisioned that vehicle congestion and travel can be reduced resulting in a corresponding reduction in passenger vehicle emissions. SB 375 directed CARB to set regional targets to reduce emissions; regional plans are required to identify how they will meet these targets.

SB 375 has three major components:

- Using the regional transportation planning process to achieve reductions in GHG emissions consistent with AB 32's goals
- Offering streamlined environmental review opportunities for eligible projects, should project proponents decide to pursue

[9] California Air Resources Board. May 2014. *First Update to the Climate Change Scoping Plan.* Available at: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

[10] California Air Resources Board. May 2014. *First Update to the Climate Change Scoping Plan.* Available at: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

- Coordinating the Regional Housing Needs Allocation Assessment (RHNA) process with the regional transportation process while maintaining local authority over land use decisions

A Sustainable Communities Strategy (SCS) is a required component of a Regional Transportation Plan (RTP). The SCS outlines certain land use growth strategies that provide for more integrated land use and transportation planning, maximizes transportation investments, strives to reduce emissions and, if feasible, and helps meet CARB's targets for the region. An alternative planning strategy (APS) must be prepared if the SCS is unable to reduce emissions and achieve the emissions reduction targets established by CARB. EO B-16-2012, described further below, can help achieve these emissions reduction targets by encouraging zero emission vehicles (ZEVs) and related infrastructure.

SB 375 provides that the SCS developed as part of the RTP does not regulate the use of land or dictate local land use policies, and further expressly provides that a city's or county's land use policies and regulations, including its general plan, are not required to be consistent with the SCS. Rather, SB 375 is intended to provide a regional policy foundation that local government may build upon, if they so choose. CARB set the following reduction targets for SCAG: reduce per capita 8 percent of GHG emissions below 2005 levels by 2020 and 13 percent below 2005 levels by 2035.

California Cap and Trade Program

Authorized by the California Global Warming Solutions Act of 2006 (AB 32), the cap-and-trade program is one of several strategies that California uses to reduce GHG emissions. CARB adopted the California Cap and Trade Program final regulations on October 20, 2011, and adopted amended regulations on September 12, 2012, with the first auction for GHG allowances on November 14, 2012.[11] Funds received from the program are deposited into the Greenhouse Gas Reduction Fund and appropriated by the Legislature. Greenhouse Gas Reduction Funds are administered by state and local agencies for a variety of greenhouse-gas cutting programs, including energy efficiency, public transit, low-carbon transportation, and affordable housing.[12] On June 20, 2014, Governor Brown signed the FY 2014–2015 California State Budget, which included a cap and trade expenditure plan for cap-and-trade revenues in the Greenhouse Gas Reduction Fund. The Cap and Trade Program is a market-based mechanism to reduce GHG emissions in a cost-effective and economically efficient manner. California is the first multisector cap and trade program in North America following the northeast Regional Greenhouse Gas Initiative (RGGI) and the European Union Emission Trading Scheme (EU-ETS). It set a GHG emissions limit that decreased by 2 percent each year until 2015, and then by 3 percent from 2015 to 2020 to achieve

[11] California Air Resources Board. *Cap and Trade Program.* Accessed 15 October 2015. Available at: http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm

[12] CalEPA. Accessed 9 February 2015. *Greenhouse Gas-Reduction Investments to Benefit Disadvantaged Communities.* Available at: http://www.calepa.ca.gov/EnvJustice/GHGInvest/

the goals in AB 32. The program initially applied to large electric power plants and large industrial plants, but included fuel distributors as of 2015. By 2015, these rules encompassed 85 percent of all of California's GHG emissions.

Clean Car Standards (Assembly Bill 1493)

On September 24, 2009, the CARB adopted Assembly Bill 1493, which makes amendments to the Clean Car Standards (Chapter 200, Statutes of 2002), also known as the "Pavley" regulations that require reductions in GHG emissions in new passenger vehicles from 2009 through 2016. These amendments are part of California's commitment toward a nation-wide program to reduce new passenger vehicle GHGs from 2012 through 2016. The Clean Car Standards required CARB to develop and adopt standards for vehicle manufacturers to reduce GHG emissions coming from passenger vehicles and light-duty trucks at a "maximum feasible and cost effective reduction" by January 1, 2005. Pavley I took effect for model years starting in 2009 to 2016; and Pavley II, which is now referred to as "LEV (Low Emission Vehicle) III GHG," will cover 2017 to 2025. Fleet average emission standards would reach 22 percent reduction by 2012 and 30 percent by 2016.[13]

As of January 2012, CARB adopted the Advanced Clean Cars program to extend AB 1493 through model years 2017 to 2025. This program will promote all types of clean fuel technologies such as plug-in hybrids, battery electric vehicles, CNG vehicles, and hydrogen powered vehicles while reducing smog and saving consumers' money in fuel costs. Fuel savings may be as up to 25 percent by 2025.

CARB released the *Advanced Clean Cars Midterm Review Report* on January 18, 2017. The report reviews the adopted Low-emission Vehicle (LEV) III GHG and PM emission standards (1 mg/mi) and ZEV requirements. The report anticipates adding 1 million ZEVs in California by 2025.[14]

Attorney General's Addressing Climate Change at the Project Level

In January 2010, the California Attorney General's Office published a document called "Addressing Climate Change at the Project Level." This document contains a list of example measures addressing energy efficiency, renewable energy and energy storage, water conservation and efficiency, solid waste measures, land use measures, transportation and motor vehicles, and agriculture and forestry.

[13] California Air Resources Board. 6 May 2013. *Clean Car Standards – Pavley, Assembly Bill 1493*. Available at: http://www.arb.ca.gov/cc/ccms/ccms.htm

[14] California Air Resources Board. 18 January 2017. *California's Advanced Clean Car Program*. Available at: https://www.arb.ca.gov/msprog/acc/acc.htm

Measures can be included as design features of a project, required as changes to the project, or imposed as mitigation.[15]

Governor's Office of Planning and Research Technical Advisory

On June 19, 2008, the Governor's Office of Planning and Research (OPR) issued a Technical Advisory on addressing climate change impacts of a proposed project under CEQA (OPR Climate Change Advisory). The OPR Climate Change Advisory recommends that lead agencies quantify, determine the significance of, and (as needed) mitigate the cumulative climate change impacts of a proposed project. The OPR Climate Change Advisory identifies that each lead agency is required, under CEQA, to exercise its own discretion in choosing how to determine significance in the absence of adopted thresholds or significance guidelines from California, CARB, or the applicable local air district.

On January 20, 2016, the OPR issued a Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA.[16] Public Resources Code section 21099 directs OPR to recommend criteria for evaluating transportation impacts that promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. This advisory provides guidance on implementing SB 743. SB 743 changes the transportation impact analysis to focus on vehicle miles traveled (VMT) instead of level of service (LOS) when analyzing project level impacts.

SB 97 CEQA Guidelines

By enacting SB 97 in 2007, California's lawmakers expressly recognized the need to analyze GHG emissions as a part of the CEQA process. SB 97 required OPR to develop, and the Natural Resources Agency to adopt, amendments to the CEQA Guidelines addressing the analysis and mitigation of GHG emissions. Those CEQA Guidelines amendments clarified several points, including the following:

- Lead agencies must analyze the GHG emissions of proposed projects, and must reach a conclusion regarding the significance of those emissions (see CEQA Guidelines § 15064.4).
- When a project's GHG emissions may be significant, lead agencies must consider a range of potential mitigation measures to reduce those emissions (see CEQA Guidelines § 15126.4(c)).
- Lead agencies must analyze potentially significant impacts associated with placing projects in hazardous locations, including locations potentially affected by climate change (see CEQA Guidelines § 15126.2(a)).

[15] California Attorney General Office. January 2010. *Addressing Climate Change at the Project Level*. Available at: http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf

[16] Office of Planning and Research. 20 January 2016. *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*. Available at: https://www.opr.ca.gov/docs/Revised_VMT_CEQA_Guidelines_Proposal_January_20_2016.pdf

- Lead agencies may significantly streamline the analysis of GHGs on a project level by using a programmatic GHG emissions reduction plan meeting certain criteria (see CEQA Guidelines § 15183.5(b)).
- CEQA mandates analysis of a proposed project's potential energy use (including transportation-related energy), sources of energy supply, and ways to reduce energy demand, including through the use of efficient transportation alternatives (see CEQA Guidelines, Appendix F).[17]

The 2017 Climate Change Scoping Plan Update[18]

The 2017 Climate Change Scoping Plan Update (Plan) establishes a framework for California to reduce GHGs by 40 percent by 2030 compared to 1990 levels. Continuing the efforts made since 2006 under AB 32, the Plan focuses on programs including Cap-and-Trade Regulation, Low Carbon Fuel Standard, cleaner cars, trucks, and freight movement, renewable energy, and reducing methane emissions from agriculture and waste. While AB 32 justified the State's climate action until 2020, SB 32 extends those actions until 2030.

Regional

Metro Long Range Transportation Plan (2009)

Adopted in 2009, Metro's Long Range Transportation Plan (LRTP) allocates $300 billion over the next 30 years to develop a balanced transportation system with options for active transportation, transit, carpool lanes, streets/highways, and a safe goods movement. This 2009 Plan will fund bikeways and transit, which can remove about 6 metric tons of air pollution and about 1,370 metric tons of GHG emissions daily. Metro is currently working to update their 2009 LRTP. Since the October 2014 Metro Board Action, Metro has completed a Mobility Matrix and performed stakeholder outreach to coordinate subregional goals, objectives, and performance measures. The current schedule anticipates adoption of the LRTP Update in 2017.

Local

Green LA: An Action Plan to Lead the Nation in Fighting Global Warming

Published in May 2007, the Green LA Climate Action Plan identifies over 50 action items that will reduce GHG emission levels in Los Angeles. The plan directs City departments to compile these actions, which

[17] Governor's Office of Planning and Research. 2011. *CEQA and Climate Change*. https://www.opr.ca.gov/s_ceqaandclimatechange.php

[18] California Air Resources Board. 20 January 2017. *The 2017 Climate Change Scoping Plan Update.* Available at: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf

include changes to City operations, goals for changing City employee behavior, sustainable practices for private sector and residents, and greening City facilities. Carbon dioxide emission reductions are quantified and reported to assess progress towards former Mayor Antonio Villaraigosa's goal to reduce emissions to 35 percent below 1990 levels by 2030.

Sustainable City pLAn

Published on April 8, 2015, Mayor Garcetti released a Sustainable City pLAn for Los Angeles city. pLAn establishes the framework to reduce Los Angeles' GHG emissions by 45 percent by 2025, 60 percent by 2035, and 80 percent by 2050 compared to 1990 levels while simultaneously balancing the economy and equity. These reductions will be achieved through creating a pathway to 50 percent renewable energy, increasing local solar energy, reducing transportation emission through cleaner fuels and transit, improving recycling and waste diversion, and reducing reliance on imported water.

3.4.2 Affected Environment/Existing Conditions

Energy entering the Earth's atmosphere can either be reflected or absorbed by Earth in what is called the Earth's radiation budget. When this budget is out of balance, the global temperature can rise or fall. GHGs in the atmosphere (such as water vapor and carbon dioxide) absorb most of the Earth's emitted longwave infrared radiation, which heats the lower atmosphere and keeps Earth habitable. Increasing concentrations of GHGs such as carbon dioxide and methane increase the amount of absorption and can increase the temperature of the lower atmosphere, resulting in "global warming," or, more broadly, global climate change.[19]

GHGs are emitted from both natural processes and human activities. Recent climate changes since the mid-twentieth century exceed what are possible by natural causes only. The Intergovernmental Panel on Climate Change (IPCC) says it is extremely likely that human activities have been the dominant cause of recent warming since the mid-20th century.[20] The main components of GHG emissions caused from human activities are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. Since each GHG absorbs radiation at a different rate, the effects of each GHG must be normalized based on a standard global warming potential (Table 3.4.2-1, *Greenhouse Gases and Global Warming Potential Compared to CO_2*). Equivalent carbon dioxide (or CO_{2e}) describes how much global warming a given type and amount of GHG may cause, using the functionally equivalent amount or concentration of CO_2 as the reference.

[19] NASA. 13 August 2014. *The Earth's Radiation Budget*. Available at: http://missionscience.nasa.gov/ems/13_radiationbudget.html

[20] Intergovernmental Panel on Climate Change. 27 September 2013. Human influence on climate clear, IPCC report says. Available at: https://www.ipcc.ch/news_and_events/docs/ar5/press_release_ar5_wgi_en.pdf

TABLE 3.4.2-1
GREENHOUSE GASES AND GLOBAL WARMING POTENTIAL COMPARED TO CO_2

GHG	Atmospheric Lifetime (years)	Global Warming Potential Relative to CO_2[a]
Carbon dioxide (CO_2)	50 to 100	1
Methane (CH_4)[b]	12 (±3)	25
Nitrous Oxide	120	298
Hydrofluorocarbons:		
HFC-23	264	14,800
HFC-32	5.6	675
HFC-125	32.6	3,500
HFC-134a	14.6	1,100
HFC-143a	48.3	1,430
HFC-152a	1.5	124
HFC-227ea	36.5	3,220
HFC-236fa	209	9,810
HFC-43-10mee	17.1	1,640
Perfluoromethane: CF_4	50,000	7,390
Perfluoroethane: C_2F_6	10,000	12,200
Perfluorobutane: C_4F_{10}	2,600	8,860
Perfluoro-2-methylpentane: C_6F_{14}	3,200	9,300
Sulfur hexaflouride (SF_6)	3,200	22,800

NOTE:
a. Based on 100-year time horizon of the global warming potential (GWP) of the air pollutant relative to CO_2.
b. The methane GWP includes the direct effects and those indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO2 is not included.
SOURCE: Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4). 4 April 2014. *Emission factors for greenhouse gas inventories*. Available at: http://www.epa.gov/climateleadership/documents/emission-factors.pdf

As described in an analysis by NASA's Goddard Institute for Space Studies, the year 2015 was the warmest year since 1880. 2015 was the first time that global average temperatures were 1 degree Celsius or more above the 1880–1899 average. The data support a long-term warming trend as most warming has occurred in the past 35 years, with 15 of the 16 warmest years on record since 2001.[21] With warming temperatures, it is critical to explore alternative transportation solutions that go beyond

[21] NASA. Accessed 20 January 2016. NASA, NOAA Analyses Reveal Record-Shattering Global Warm Temperatures in 2015. Available at: http://www.nasa.gov/press-release/nasa-noaa-analyses-reveal-record-shattering-global-warm-temperatures-in-2015

the automobile to reduce harmful PM and NOx emissions. Streets that incorporate public transit and active transportation reduce individuals' carbon footprint and support healthier lifestyles.

Sources of GHG Emissions

Global

Global GHG emissions in 2012 were 43,286.2 $MMTCO_{2e}$.[22] The top 10 GHG emitters in the world contribute 72 percent of global GHG emissions, not including land use change and forestry. The top 10 GHG emitters, in order from the most polluting, are China, United States, European Union, India, Russian Federation, Indonesia, Brazil, Japan, Canada, and Mexico. China contributed the most, accounting for approximately 25.4 percent (or 10,975.5 $MMTCO_{2e}$) of the world's total, while the U.S. was the second largest contributor, accounting for approximately 14.4 percent (6,235.1 $MMTCO_{2e}$). Six of the top 10 GHG emissions contributors are developing countries, which reflect a shift in the geopolitical landscape as developed countries used to dominate the top 10 GHG emitters list. The energy sector accounts for more than 75 percent of total global GHG emissions, making it a primary focus in achieving reductions.[23]

The Paris Climate Agreement was reached on December 12, 2015, at the 21st Conference of the Parties of the United Nations Framework Convention on Climate Change. The agreement addresses strategies for GHG reduction, adaptation, resiliency, and financing. The 195 countries in attendance of the conference negotiated a major global climate goal to hold warming to below 2 degrees Celsius. The initial target date for implementation of the agreement is set for 2020, but could potentially begin as soon as 2016 or 2017. The Paris Agreement became effective on November 4, 2016. As of October 5, 2016, 155 of 197 parties had ratified the Paris Agreement.[24] On June 1, 2017, President Trump withdrew the United States from the Paris Agreement.[25]

National

In 2014, the United States emitted 6,870.5 $MMTCO_{2e}$. Total U.S. GHG emissions have increased by 7.4 percent from 1990 to 2014. From 2013 to 2014, U.S. GHG emissions increased 1 percent because of

[22] Infographic: What Do Your Country's Emissions Look Like? Accessed 23 June 2015. Available at: http://www.wri.org/blog/2015/06/infographic-what-do-your-countrys-emissions-look

[23] Infographic: What Do Your Country's Emissions Look Like? Accessed 23 June 2015. Available at: http://www.wri.org/blog/2015/06/infographic-what-do-your-countrys-emissions-look

[24] United Nations Framework Convention on Climate Change. Accessed 27 July 2017. *The Paris Agreement*. Available at: http://unfccc.int/paris_agreement/items/9485.php

[25] United States Environmental Protection Agency. 1 June 2017. *Administrator Scott Pruitt Speech on Paris Accord, As Prepared.* Available at: https://www.epa.gov/speeches/administrator-scott-pruitt-speech-paris-accord-prepared

increased transportation emissions and a relatively cool winter requiring more fuel consumption for heating. However, the national GHG emissions level in 2014 was 8.6 percent below 2005 levels.[26]

In June 2013, President Obama announced the U.S. Climate Action Plan, which takes a three-pronged approach by cutting carbon pollution, preparing for the impacts of climate change, and leading international efforts to address global climate change. The Plan aims to reduce carbon pollution by focusing on setting emission standards for new and existing power plants, improving energy efficiency in vehicles and buildings, reducing energy waste, and investing in renewable energy projects. The Plan also includes climate adaptation strategies to address climate vulnerabilities, such as drought and wildfires, and increases resiliency in how cities are built. On March 28, 2017, President Trump issued an Executive Order on Promoting Energy Independence and Economic Growth, which rescinded several energy and climate related executive orders and plans including the President's Climate Action Plan of June 2013 and Climate Action Plan Strategy to Reduce Methane Emissions of March 2014.[27]

State of California

California Greenhouse Gas Inventory. The California Greenhouse Gas Inventory, maintained by the CARB, includes emissions from CO_2, CH_4, N_2O, sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and nitrogen trifluoride (NF_3). Of the total 441.5 $MMTCO_{2e}$ of GHG emissions in 2014, 84 percent were from CO_2. In 2014, the transportation sector and the industrial sector were the top two GHG emissions contributors, at 36 percent and 21 percent, respectively. The GHG Mandatory Reporting Program is a primary data source for the statewide emission inventory (Table 3.4.2-2, *California Greenhouse Gas Inventory for 2000–2014 by Economic Sector*).[28] In 2011, CARB partnered with the University of California, Berkeley, to develop new methodologies using land-based data sets and remote sensing data to evaluate carbon stock changes in California. The covered lands include forests, woodlands, shrub lands, grasslands, and wetlands, but not urban or agricultural lands.[29]

[26] U.S. Environmental Protection Agency. April 2016. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014*. Available at: https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf

[27] Office of the Press Secretary, The White House. 28 March 2017. *Presidential Executive Order on Promoting Energy Independence and Economic Growth.* Available at: https://www.whitehouse.gov/the-press-office/2017/03/28/presidential-executive-order-promoting-energy-independence-and-economi-1

[28] California Air Resources Board. 17 June 2016. *California Greenhouse Gas Emission Inventory -2016 Edition*. Available at: http://www.arb.ca.gov/cc/inventory/data/data.htm

[29] California Air Resources Board. 6 May 2015. *California Greenhouse Gas Inventory - Forests and Other Lands.* Available at: http://www.arb.ca.gov/cc/inventory/sectors/forest/forest.htm

TABLE 3.4.2-2
CALIFORNIA GREENHOUSE GAS INVENTORY FOR 2000–2014 BY ECONOMIC SECTOR

Sector	CO_{2e} Emissions (in Million Metric Tons)														
	2000	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Electricity (In state)	59	63	50	48	49	45	50	54	54	53	47	41	51	50	52
Electricity (Imports)	46	59	59	65	66	63	55	60	66	48	44	47	44	40	37
Transportation	178	179	186	183	185	187	187	187	176	170	166	163	163	162	163
Industrial	104	103	104	103	106	104	102	99	99	97	101	101	101	104	104
Commercial	14	14	16	15	16	16	17	17	18	19	20	21	21	22	22
Residential	31	30	30	31	30	30	30	30	31	30	31	32	30	31	27
Agriculture & forestry	32	32	34	34	34	36	36	36	34	35	36	37	37	35	36
Not specified	1	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Total	**469**	**485**	**483**	**486**	**495**	**488**	**486**	**493**	**490**	**462**	**456**	**455**	**461**	**459**	

SOURCE: California Air Resources Board. Updated 24 April 2015. *California Greenhouse Gas Inventory for 2000-2014 – by Sector and Activity*. Available at: https://www.arb.ca.gov/cc/inventory/data/tables/ghg_inventory_sector_sum_2000-14.pdf

In 2014, total California GHG emissions were 441.5 $MMTCO_{2e}$. Total GHG emissions decreased by 2.8 $MMTCO_{2e}$ from 2013 to 2014. This is an overall decrease of 9.4 percent since peak levels in 2004. Per capita emissions in California have decreased by 18 percent from 2000 to 2013, going from 13.9 metric tons of CO_{2e} per person in the peak of 2001 to 11.4 metric tons of CO_{2e} per person in 2014.[30] The GHG inventory additionally shows as GDP rises from 2000 to 2014, emissions per unit GDP, otherwise known as carbon intensity, has been declining. Carbon intensity has declined 28 percent since its 2001 peak.[31]

For 2014, transportation makes up the largest portion at 36 percent of gross GHG emissions. Of the 163 $MMTCO_{2e}$ emitted by transportation, 70 percent of the transportation emissions are from light duty vehicles. While population growth has increased the number of vehicles on the road, vehicles have been getting cleaner pursuant to AB 1493. The next largest emitting sectors are industrial and electricity generation, which contribute 21 percent and 20 percent, respectively, of the total GHG emissions.

Since 2012, wind, solar, and natural gas generation have surpassed nuclear and hydropower because of the closure of the San Onofre Nuclear Generating Station and lower hydropower generation as a result of California's drought. Renewable energy continues to increase, reaching nearly 25 percent by 2014. [32]

Union Station Site Conditions

Metro has shown their commitment to sustainability by producing a Sustainability Report annually since 2010 and setting forth environmental initiatives like the Environmental Management System and Green Construction Policy. Additionally, Metro has partnered with USGBC-LA to provide Green Professional Training (GPRO) classes as a training and certification program for on-the-ground building professionals involved with Metro projects and facilities who seek to integrate green practices into their core knowledge. The GPRO training is being provided to all trades (designers, planners, engineers, facilities and maintenance staff) to cover the "green gap" between standard trade skills and the new knowledge, awareness, and skills required to successfully implement green building.

The proposed project comprises traffic and street improvements to Alameda Street, which is adjacent to Union Station, and a new civic plaza and esplanade. Sources of GHG emissions is limited to the vehicles

[30] California Air Resources Board. 17 June 2016. *California Greenhouse Gas Emissions for 2000 to 2014 – Trends of Emissions and Other Indicators*. Available at: https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf

[31] California Air Resources Board. 17 June 2016. *California Greenhouse Gas Emissions for 2000 to 2014 – Trends of Emissions and Other Indicators*. Available at: https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf

[32] California Air Resources Board. 17 June 2016. *California Greenhouse Gas Emissions for 2000 to 2014 – Trends of Emissions and Other Indicators*. Available at: https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf

on Alameda Street during operation. The project is designed to incorporate sustainability components such as pervious pavement, shade, and mixed-use pedestrian/bike friendly routes. Construction would cause emissions in the short term from the use of heavy duty construction equipment.

3.4.3 Environmental Impacts/Environmental Consequences

Methodology

Similar to the air quality analysis, the GHG emissions were calculated using CalEEMod 2016.3.1. CalEEMod, California Emissions Estimator Model. This is the standard model to use statewide to calculate land use emissions during construction and operation. The model calculates direct emissions from construction equipment and vehicle use as well as indirect emissions from energy use, water use, and vegetation. The full methodology used in the GHG analysis is described in Section 4.0, *Methods and Significance Thresholds*, in the *Air Quality and Greenhouse Gas Emissions Technical Report* (Appendix B to the Draft EIR).

The State CEQA Guidelines recommend the consideration of two questions when addressing the potential for significant impacts to GHG emissions. Would the proposed project:

(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The proposed project would result in less than significant impacts to GHG emissions in regard to generating GHG emissions, either directly or indirectly, that may have a significant effect on the environment.

Construction

The proposed project is estimated to produce approximately 153 MT CO2e/year during the construction phase (Appendix B, *Air Quality and Greenhouse Gas Emissions Technical Report*). Because the proposed project would reduce vehicle emissions and provide a multi-use path and a civic plaza, the proposed project would not generate a significant amount of GHG emissions. Metro's Green Construction Policy would require implementation of best management practices for reducing diesel exhaust emissions for both on-road and off-road equipment/vehicles. As the Los Angeles pLAn and SCAQMD do not specify project level goals for GHG emissions, the Sacramento Metropolitan Air Quality Management District (SMAQMD) Recommended Guidance for Land Use Emission Reduction Version 3.2 was used as a proxy for comparison. The SMAQMD Guidance states that 1,100 MT CO_{2e}/year is the significance threshold for

construction emissions.[33] As the project is well below that threshold for GHG emissions, the project would have a less than significant impact with regard to generating GHG emissions during the construction phase.

Operation

The proposed project is estimated to produce 126 MT CO_{2e}/year during the operational phase (Appendix B, *Air Quality and Greenhouse Gas Emissions Technical Report*). Similar to the construction phase, the SMAQMD Guidance was used to establish an operational GHG emissions threshold for comparison. The SMAQMD Guidance states that 1,100 MT CO_{2e}/year is the significance threshold for operational emissions. As the project is well below that threshold for GHG emissions, the project would have a less than significant impact with regard to generating GHG emissions during the operational phase. No mitigation would be required.

(b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would result in no impact to GHG emissions in regard to conflicting with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The applicable policy for the proposed project in regard to regulating GHG emissions is AB 32, which mandates a reduction of GHG emissions to 1990 levels by 2020. This goal is embodied on the city level in GreenLA, which uses a multiprong approach targeting energy, water, transportation, waste, open space, and a green economy to reduce GHG emissions in Los Angeles. Written in 2007, GreenLA set the goal of reducing the city's GHG emissions to 35 percent below 1990 levels by 2030. The proposed project would improve mobility without increasing vehicle usage and create more livable spaces in the urban core, which are actions in alignment with the strategies in GreenLA. As a forecourt and esplanade improvements project, the proposed project would not generate a significant amount of GHG emissions in either the construction or operation phase. Construction emissions would be further reduced by adherence to Metro's Green Construction Policy. The proposed project is also listed in the SCAG 2016–2040 RTP/SCS, so it is consistent with regional plans to reduce GHG emissions. Most recently, the City of Los Angeles produced the 2015 Sustainable City pLAn. The proposed project is consistent with the pLAn because it would support public transit, walking, and cycling by providing the Alameda Esplanade. Improving the facilities at a transportation hub like Union Station would further reduce transportation emissions, consistent with the pLAn, since people would be encouraged to get out of their vehicles. The project would not hinder, but rather help, Los Angeles reach the GHG emissions targets of 20 percent

[33] Sacramento Metropolitan Air Quality Management District. 1 April 2015. *SMAQMD Recommended Guidance for Land Use Emission Reductions*. Available at: http://www.airquality.org/LandUseTransportation/Documents/SMAQMD%20LU%20Measures-Final_v3-2.pdf

below the 1990 baseline by 2013 and 45 percent below the 1990 baseline by 2025. Therefore, the proposed project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and no mitigation would be required.

3.4.4 Cumulative Impacts

(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding the generation of GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Sixty-three development projects are located in the vicinity of the proposed project, including Metro projects, residential development, commercial development, bus stop improvements, active transportation corridors, mixed-use projects, and more. The proposed project would not have a substantial amount of emissions in the global scale. The main project elements are a road diet, esplanade, and forecourt improvements. These types of projects are not major sources of GHG emissions and would have long-term benefits to reducing GHG emissions to achieve GHG reduction targets set by City of Los Angeles. Even with consideration of the other development projects in the area, the proposed project would have a less than significant impact with regard to GHG emissions because many of the other projects would also provide better transit services, walking and biking facilities, transit-oriented development, and higher density areas in an urban location. Such features would reduce VMT and therefore reduce GHG emissions. Therefore, impacts would be less than significant, and no mitigation would be required.

(b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The other development projects in the area would be developed in compliance with the Air Quality Management Plan and SCAG 2016–2040 RTP/SCS. Related projects would also be built in a high-quality transit area that would reduce VMT. Therefore, impacts would be less than significant, and no mitigation would be required.

3.4.5 Mitigation Measures

Mitigation would not be required.

3.4.6 Level of Significance after Mitigation

Impacts would be less than significant.

3.5 Biological Resources

This section of the Environmental Impact Report (EIR) analyzes potential impacts to biological resources from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The analysis of biological resources consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

Biological resources were evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines). Biological resources within the project site were evaluated in relation to the federal Endangered Species Act (ESA); the Migratory Bird Treaty Act (MBTA); the Clean Water Act Sections 400 and 401; the California ESA; Sections 1600-1603, 3503, 3503.5, 3511, 4700, 5050, and 5515 of the California Fish and Game Code; the California Department of Fish and Wildlife (CDFW) list of Species of Special Concern; the Native Plant Protection Act; the City of Los Angeles General Plan (including the Central City and Central City North Community Plans); the Alameda District Specific Plan; and the City of Los Angeles Protected Tree Ordinance. In addition, biological resources were evaluated by reviewing the California Natural Diversity Database, the California Native Plant Society Electronic Inventory, U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation, the National Wetlands Inventory (NWI), U.S. Geological Survey (USGS) National Hydrography Dataset (NHD) blueline drainage data, and geographic information systems (GIS) data for the project site and its vicinity.

3.5.1 Regulatory Setting

Federal

Federal Endangered Species Act

The 1973 ESA (16 U.S. Code 1531-1544) defines listed species as “endangered” or “threatened” and provides regulatory protection for listed species. The federal ESA provides a program for conservation and recovery of threatened and endangered species; it also ensures the conservation of designated critical habitat that the USFWS has determined is required for the survival and recovery of these listed species. Section 9 of the federal ESA prohibits the “take” of species listed by USFWS as threatened or endangered. Take is defined as follows: “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in such conduct.” In recognition that take cannot always be avoided, Section 10(a) of the federal ESA includes provisions for take that is incidental to, but not the purpose of, otherwise lawful activities. Section 10(a)(1)(B) permits (incidental take permits) may be issued if take is incidental and does not jeopardize the survival and recovery of the species. As defined in the federal ESA, individuals, organizations, states, local governments, and other non-federal entities are affected by the designation of critical habitat only if their actions occur on federal lands; require a federal permit, license, or other authorization; or involve federal funding.

Migratory Bird Treaty Act

The MBTA of 1918 (16 U.S. Code 703-712), as amended, provides for federal protection of all migratory bird species and does not include provisions for authorized take. Under the MBTA, it is unlawful to pursue, hunt, take, capture, kill, or sell birds, their active nests, eggs, parts, and so forth. Nesting birds and the nest contents within the project area are afforded protection during the breeding season (February 1–August 31) pursuant to the MBTA. Nonfederal contractors are required to obtain a depredation permit from the USFWS prior to removal or disturbance of nesting birds.

Clean Water Act Section 404

Section 404 of the federal Clean Water Act, which is administered by the U.S. Army Corps of Engineers (USACOE), regulates the discharge of dredged and fill material into waters of the United States, which include surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other waters, and all impoundments of these waters. USACOE has established a series of nationwide permits that authorize certain activities in waters of the United States, provided that a proposed activity can demonstrate compliance with standard conditions. Projects that result in the loss of less than the acreage specified by the applicable nationwide permit can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard permit conditions. If the conditions of a nationwide permit cannot be met, or the project results in more than minimal adverse environmental impact, an individual permit may be required.

Clean Water Act Section 401

Section 401 of the federal Clean Water Act is administered by the State Water Resources Control Board and the Regional Water Quality Control Boards (RWQCBs). The RWQCBs also assert authority over waters of the State under waste discharge requirements pursuant to the Porter-Cologne Act. Section 401 requires that prior to any federal permit or license, any activity, including river or stream crossings during road, pipeline, or transmission line construction, which may result in discharges into waters of the United States, must be certified by the applicable RWQCB, in this instance the Los Angeles RWQCB. This certification ensures that the proposed activity does not violate state and/or federal water quality standards.

State

State Fish and Game Code Sections 2080 and 2081—California Endangered Species Act

The California ESA (California Fish and Game Code §§ 2050 et seq.) prohibits the take of listed species, except as otherwise provided in state law. The *take* for the California ESA is defined as it is in the federal ESA; however, unlike the federal ESA, the California ESA also applies the take prohibitions to species petitioned for listing as state candidates rather than only those listed species. State lead agencies are required to consult with the CDFW to ensure that any actions undertaken by the lead agency are not likely to jeopardize the continued existence of any state-listed species or result in destruction or

degradation of required habitat. CDFW is authorized to enter into Memoranda of Understanding with individuals, public agencies, universities, zoological gardens, and scientific or educational institutions to import, export, take, or possess listed species for scientific, educational, or management purposes. Permits for incidental take of species protected pursuant to the California ESA are available under certain circumstances as described in Sections 2080 and 2081 of the California Fish and Game Code described below.

Section 2080 of the California ESA states:

> No person shall import into this state [California], export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.

Pursuant to Section 2081 of the Fish and Game Code, CDFW may authorize individuals or public agencies to import, export, take, or possess, any state-listed endangered, threatened, or candidate species. These otherwise prohibited acts may be authorized through permits or Memoranda of Understanding as follows: (1) if the take is incidental to an otherwise lawful activity, (2) if impacts of the authorized take are minimized and fully mitigated, (3) if the permit is consistent with any regulations adopted pursuant to any recovery plan for the species, and (4) if the applicant ensures adequate funding to implement the measures required by CDFW. CDFW shall make this determination based on available scientific information and shall include consideration of the ability of the species to survive and reproduce.

State Fish and Game Code Sections 3503 and 3503.3

Sections 3503 and 3503.5 of the California Fish and Game Code provide regulatory protection to resident and migratory birds and all birds of prey within the state of California, including the prohibition of the taking of nests and eggs, unless otherwise provided for by the Fish and Game Code. Specifically, these sections of the Fish and Game Code make it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code.

CDFW Species of Special Concern

CDFW defines a Species of Special Concern (SSC) as a species, subspecies, or distinct population of an animal (bird, mammal, fish, reptile, and amphibian) native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the state or, in the case of birds, in its primary seasonal or breeding role;
- Is listed as federally-, but not state-, threatened or endangered;
- Meets the State definition of threatened or endangered but has not formally been listed;

- Is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s) that if realized could lead to declines that would qualify it for state threatened or endangered status.

"Species of Special Concern" is an administrative designation and carries no formal legal status; however, SSCs should be considered during the environmental review process. CEQA requires state agencies, local governments, and special districts to evaluate and disclose impacts from "projects" in the state of California. Section 15380 of the CEQA Guidelines clearly indicates that SSCs should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.

California Fish and Game Code Section 3511

The state of California classifies certain animals as "Fully Protected." This classification was the state's initial effort in the 1960s to identify and provide additional protection to certain species that were rare or faced possible extinction. Lists were made for fish, mammals, amphibians and reptiles, birds, and mammals. Most of the species on these lists have subsequently been listed under the state and/or federal ESAs. Sections 3511, 4700, 5050 and 5515 of the Fish and Game Code state that Fully Protected species (birds, mammals, fish, reptiles, amphibians) or parts thereof may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Native Plant Protection Act – California Fish and Game Code Sections 1900–1913

The Native Plant Protection Act includes measures to preserve, protect, and enhance rare and endangered native plants. The list of native plants afforded protection pursuant to the Native Plant Protection Act includes those listed as rare and endangered under the California ESA. The Native Plant Protection Act provides limitations that no person would import into this state—or take, possess, or sell within the State of California—any rare or endangered native plant, except in compliance with provisions of the act. Where individual landowners have been notified by the CDFW that rare or native plants are growing on their land, the landowners are required to notify the CDFW at least 10 days in advance of changing land uses to allow the CDFW to salvage any rare or endangered native plant material.

California Fish and Game Code Sections 1600 through 1603

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California are subject to the regulatory authority of the CDFW pursuant to Sections 1600 through 1603 of the California Fish and Game Code and require preparation of a Lake or Streambed Alteration Agreement. Pursuant to the Code, a stream is defined as a body of water that flows at least periodically, or intermittently, through a bed or channel having banks and supporting fish or other aquatic life. Based on this definition, a watercourse with surface or subsurface flows that support or

have supported riparian vegetation is a stream and is subject to CDFW jurisdiction. Altered or artificial waterways valuable to fish and wildlife are subject to CDFW jurisdiction. The CDFW must be contacted for a Lake or Streambed Alteration Agreement for any project that may impact a streambed or wetland. The CDFW has maintained a "no net loss" policy regarding potential impact and has required replacement of lost habitats on at least an acre-for-acre ratio.

Local

City of Los Angeles General Plan

The City of Los Angeles General Plan[1] includes the following policies related to biological resources:

- Require evaluation, avoidance, and minimization of potential significant impacts, as well as mitigation of unavoidable significant impacts on sensitive animal and plant species and their habitats and habitat corridors relative to land development activities.
- Identify significant habitat areas, corridors and buffers and to take measures to protect, enhance and/or restore them.
- Work cooperatively with other agencies and entities in protecting local habitats and endangered, threatened, sensitive and rare species.

Specifically, there are two policies that are applicable to the development of the proposed project:

> *Section 6, Policy 1:* continue to require evaluation, avoidance, and minimization of potential significant impacts, as well as mitigation of unavoidable significant impacts on sensitive animal and plant species and their habitats and habitat corridors relative to land development activities.
>
> *Section 6, Policy 2:* continue to administer city-owned and managed properties so as to protect and/or enhance the survival of sensitive plant and animal species to the greatest practical extent.

Central City North Community Plan

The proposed project is located within the Central City North Community Plan, a component of the City of Los Angeles General Plan. The Central City North Community Plan does not contain goals or policies that cover biological resources.

[1] City of Los Angeles Department of City Planning, 26 September 2001. Conservation Element of the City of Los Angeles General Plan. Contact: City of Los Angeles, Department of City Planning, 200 North Spring Street, Los Angeles, CA 90012.

Alameda District Specific Plan

The proposed project is located within the Alameda District Specific Plan, a component of the City of Los Angeles General Plan and Central City North Community Plan. The Alameda District Specific Plan does not contain goals or policies that cover biological resources.

City of Los Angeles Protected Tree Ordinance

The City of Los Angeles Protected Tree Ordinance No. 177404 prohibits relocating, removing, or engaging in any act that may result in the death of a protected tree without prior applicable government action (see Section 5, Subsection R, of Section 17.05 of the Los Angeles Municipal Code). Protected under this ordinance are any of the following native Southern California tree species which measures 4 inches or more in cumulative diameter, 4.5 feet above the ground level at the base of the tree: Oak tree including valley oak (*Quercus lobata*) and coast live oak (*Q. agrifolia*), or any other tree of the oak genus indigenous to California but excluding the scrub oak (*Q. dumosa*) and nursery grown oaks, Southern California black walnut (*Juglans californica* var. *californica*), western sycamore (*Platanus racemosa*), and California bay (*Umbellularia californica*). This ordinance shall not protect any tree grown or held for sale by a licensed nursery or trees planted or grown as part of a tree planting program. Any project in the City of Los Angeles that requires the removal of protected trees or impacts such trees in a manner that causes protected tree death will require submission of a Protected Tree Report. All protected tree removals require approval by the Board of Public Works and an Urban Forestry Division issued protected tree removal permit.

3.5.2 Affected Environment/Existing Conditions

This section provides the environmental setting for sensitive biological resources in the project vicinity, which for this analysis comprises the USGS 7.5-minute series, Los Angeles, topographic quadrangle where the proposed project is located, in addition to the eight surrounding quadrangles: Burbank, Pasadena, Mount Wilson, Hollywood, El Monte, Inglewood, South Gate, and Whittier. However, the project site of approximately 6.7 acres (292,274 square feet) is very small in relation to the approximately 39,500 acres (62 square miles) included in the nine-quadrangle area, and the project site is located in a highly developed area of the City of Los Angeles. This section includes information on the following baseline conditions in the project site and its vicinity: listed, sensitive, and locally important species; state-sensitive and riparian plant communities; federally protected wetlands and waterways; migratory corridors and nursery sites for native Southern California wildlife; local policies and ordinances; and Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs).

Listed, Sensitive, and Locally Important Species

The California Natural Diversity Database (CNDDB)[2] and the California Native Plant Society Electronic Inventory (CNPS)[3] were queried for the project vicinity. In addition, the USFWS Information for Planning and Conservation[4] was queried for the local vicinity of the project. These records searches revealed that the project vicinity is within the historic range of a total of 92 listed, sensitive, and locally important species (Appendix C, *Biological Resources Records Search Results*).

State and Federally Listed Species

Of the 92 sensitive species considered in the evaluation, the records searches identified 18 that are listed pursuant to the federal and/or California ESAs, including 11 plant species and 7 wildlife species. In addition, there is one candidate state endangered species (Appendix C, Table C-1, *State and Federally Listed Species with Historical Occurrences in the Region*). The CNDDB search identified occurrence of three of these species within a 5-mile radius of the proposed project site (Figure 3.5.2-1, *CNDDB 5-Mile Radius for Listed Species*).

The subject species require natural habitats with specific aquatic, lowland, and upland characteristics. The proposed project site is entirely developed, and located within a highly urbanized area of the City of Los Angeles consisting of streets, sidewalks, parking lots, existing buildings, railroad tracks, and street landscaping with non-native plant species. Of the 18 listed species and one candidate species with historic occurrences in the region, none were determined to have the potential to occur within the proposed project site due to lack of suitable habitat. This determination was made based on a desktop analysis of each species' habitat requirements (Appendix C, Table C-1).

Coastal California gnatcatcher (*Polioptila californica californica*) is a listed species that occurs within Los Angeles. However, coastal California gnatcatcher lives in coastal shrub, which is not present on the project site. The coastal California gnatcatcher can be excluded due to the lack of habitat on the project site.

Critical Habitat

Critical habitat is a designated area defined by the USFWS as being important for the survival and recovery of species listed as rare, threatened, or endangered pursuant to the federal ESA. No critical habitat areas have been designated within 5 miles of the proposed project site.

[2] California Department of Fish and Game, Biogeographic Data Branch. Accessed January 2017. *Rarefind 5: A Database Application for the Use of the California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA.

[3] California Native Plant Society. 2017. CNPS Electronic Inventory. Available at: www.cnps.org

[4] United States Fish and Wildlife Service. 2017. Environmental Conservation Online System: Information for Planning and Conservation. Available at: https://ecos.fws.gov/ipac/

Other Sensitive and Locally Important Species

Of the 92 species considered in this evaluation, the records searches identified 73 sensitive and locally important species that have not been listed as threatened or endangered under the federal or state ESAs, including 50 plant species and 23 wildlife species (Appendix C, Table C-2, *Other Sensitive and Locally Important Species with Historical Occurrences in the Region*). These sensitive and locally important species have been afforded special recognition by federal, state, and/or local resource agencies or jurisdictions, or recognized resource conservation organizations. Designations for other sensitive and locally important species include CDFW Fully Protected (FP); CDFW Species of Special Concern (SSC); CDFW Watch List (WL); CDFW California Special Animal (CSA); USFWS Birds of Conservation Concern (BCC); and CNPS rare (California Rare Plant Rank 1-4). The CNDDB record search identified occurrences of 15 of these species within a 5-mile radius of the proposed project site (Figure 3.5.2-2, *CNDDB 5-Mile Radius for Other Sensitive Species*).

The subject species require natural habitats with specific aquatic, lowland, and upland characteristics. The proposed project site is entirely developed, and located within a highly urbanized area of the City of Los Angeles consisting of streets, sidewalks, parking lots, existing buildings, railroad tracks, and street landscaping with non-native plant species.

Of the 73 special status species with historic occurrences in the region, only the American peregrine falcon (*Falco peregrinus anatum*) was determined to have the potential to occur within the proposed project area. The American peregrine falcon is designated as a Fully Protected species by the CDFW. Peregrine falcons occasionally nest on the roofs of tall buildings in urban areas.[5] The tall buildings in the vicinity of the project site may serve as potentially suitable habitat for this species. However, the nearest historical record of peregrine falcon occurred over 5 miles northeast of the project site.

There is no suitable habitat present on the project site for the remaining 72 species due to a lack of undeveloped areas and native vegetation. This determination was made based on a desktop analysis of each species' habitat requirements (Appendix C, Table C-2).

[5] Cade, Tom J., Mark Martell, and Patrick Redig. 1996. "Peregrine Falcons in Urban North America." *Raptors in Human Landscapes: Adaptation to Built and Cultivated Environments* 1.

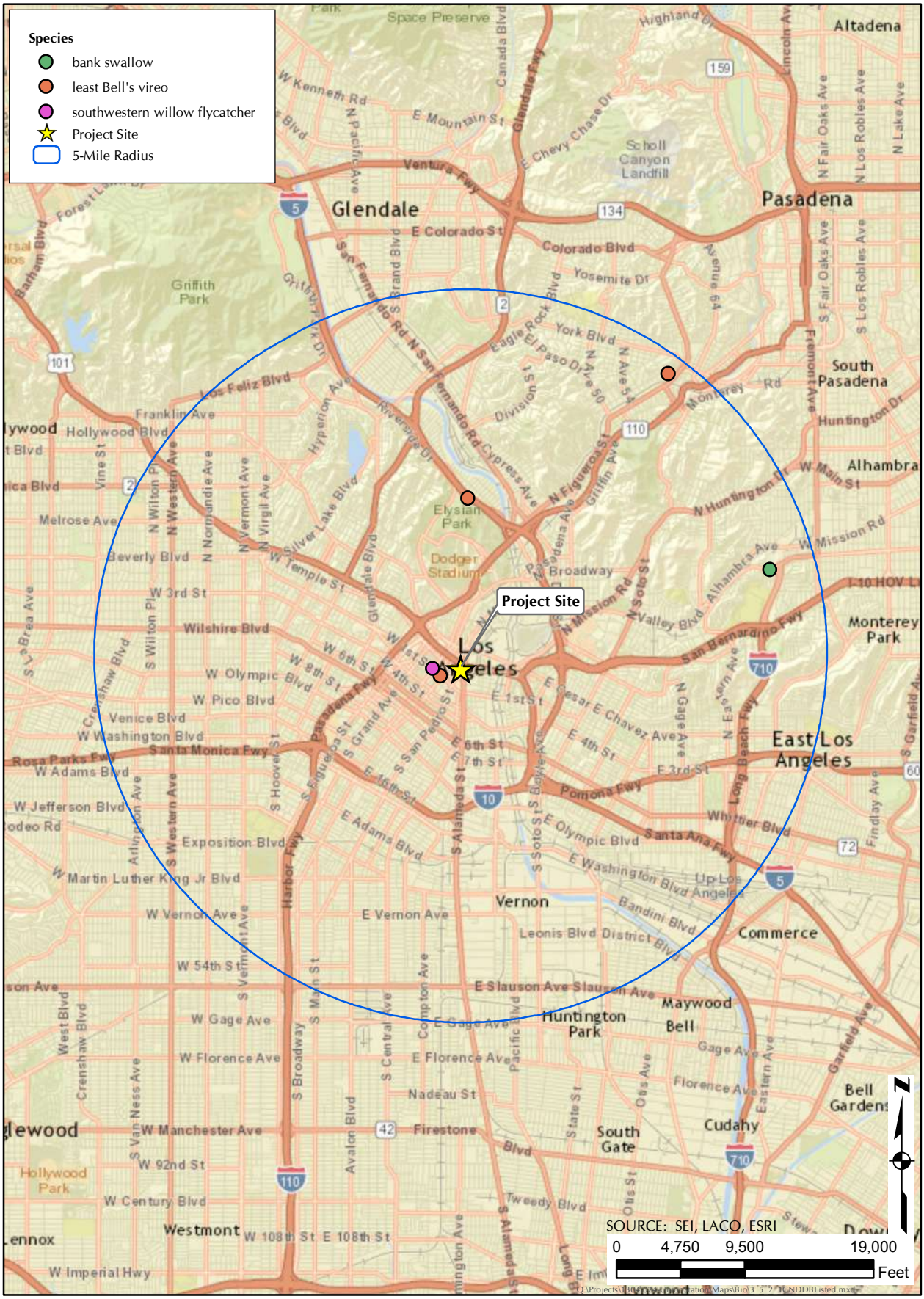


Figure 3.5.2-1. CNDDB 5-Mile Radius for Listed Species

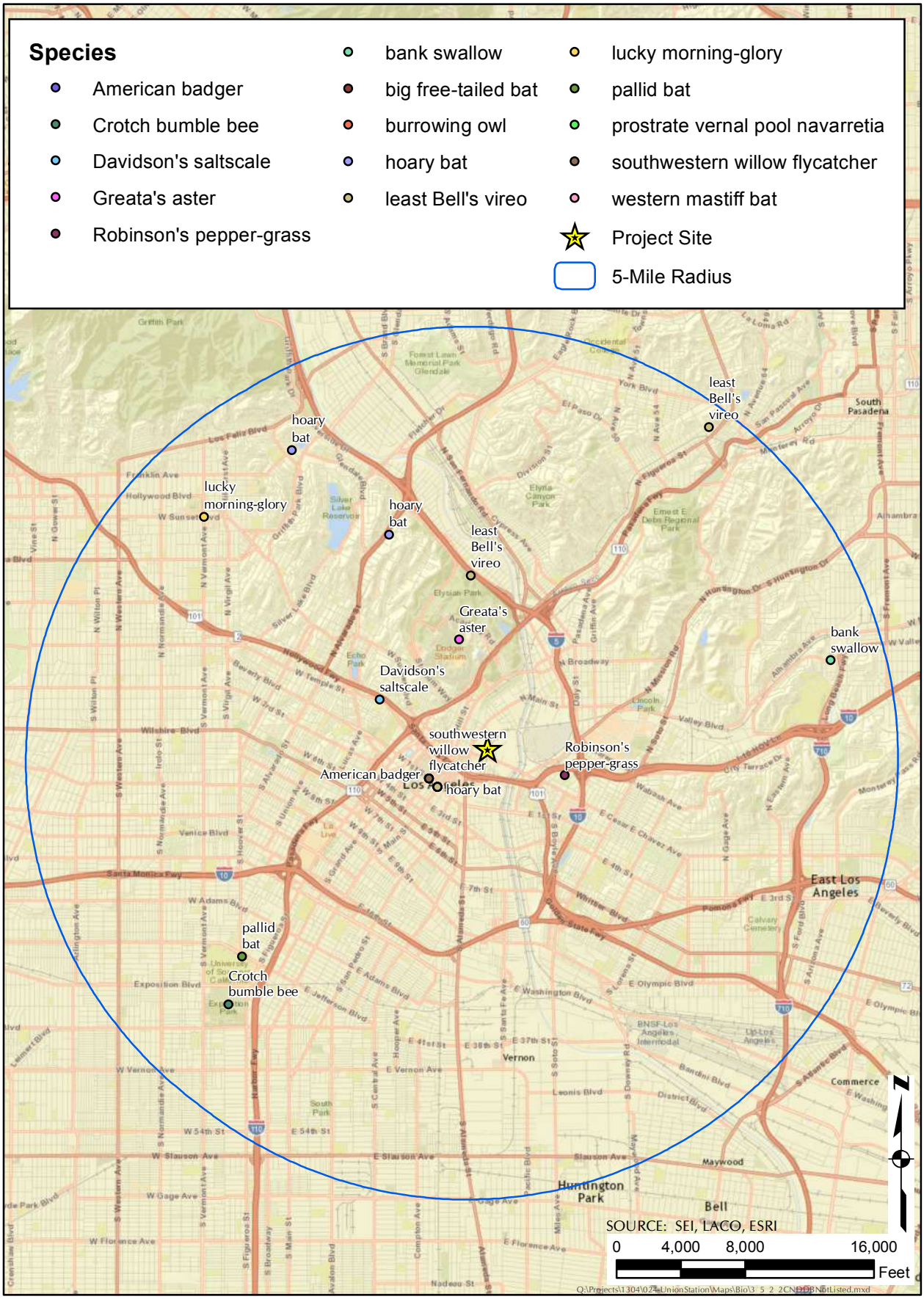


Figure 3.5.2-2. CNDDB 5-Mile Radius for Other Sensitive Species

Riparian and State Sensitive Plant Communities

The Natural Heritage Division of CDFW identifies special-status natural communities. A record search of the CNDDB reported seven state-sensitive or riparian natural communities within the project vicinity (Table 3.5.2-1, *Riparian Habitat and State Sensitive Plant Communities Reported in the Project Vicinity*). In addition, the NWI[6] identified approximately 3,414 acres of Forested/Shrub Riparian habitat and 3 acres of Herbaceous Riparian habitat within the project vicinity. However, the only state-designated sensitive community or riparian habitat present within 5 miles of the proposed project site, Walnut Forest, is located approximately 3.5 miles to the northeast (Figure 3.5.2-3, *CNDDB 5-Mile Radius for Terrestrial Communities*).

TABLE 3.5.2-1
RIPARIAN HABITAT AND STATE SENSITIVE PLANT COMMUNITIES REPORTED IN THE PROJECT VICINITY

Community Name	State Sensitivity Rank	Acres Reported in the Project Vicinity
California Walnut Woodland	S2.1	171.4
Open Engelmann Oak Woodland	S2.2	870.5
Riversidian Alluvial Fan Sage Scrub	S1.1	380.5
Southern Coast Live Oak Riparian Forest	S4	1,693.3
Southern Cottonwood Willow Riparian Forest	S3.2	83.7
Southern Sycamore Alder Riparian Woodland	S4	4,985.3
Walnut Forest	S1.1	66.5
Total		**8,251.4**

NOTE: State Rank: S1 = Fewer than 6 viable occurrences statewide and/or up to 518 hectares; S2 = 6–20 viable occurrences statewide and/or more than 518–2,590 hectares; S3 = 21–100 viable occurrences statewide and/or more than 2,590–12,950 hectares; S4 = Greater than 100 viable occurrences statewide and/or more than 12,950 hectares.
Threat Rank: 0.1: Very Threatened; 0.2: Threatened.
SOURCE: California Department of Fish and Wildlife. 2016. *Rarefind 5: A Database Application for the Use of the California Department of Fish and Game Natural Diversity Data Base*. Sacramento, CA.

Federally Protected Wetlands and Waterways

Current NWI maps and USGS NHD blueline drainage data for the project vicinity were reviewed for potential wetlands and waterways subject to protection under Section 404 of the Clean Water Act. Wetlands and waterways potentially subject to the jurisdiction of the USACOE are not present on the project site. The closest wetland or blueline drainage is the concrete-lined channel of the Los Angeles River, approximately 0.5 miles east of the project site (Figure 3.5.2-4, *National Wetland Inventory and USGS Blueline Drainages within a 5-Mile Radius of the Project Location*).

[6] U.S. Fish and Wildlife Service. n.d. National Wetlands Inventory Map. Available at: http://www.fws.gov/wetlands/Wetlands-Mapper.html

Migratory Corridors and Nursery Sites

A desktop analysis, including aerial imagery habitat and land use assessments, and review of existing data indicative of the presence of wildlife movement corridors and nursery sites in the project vicinity was conducted. Significant Ecological Areas (SEAs) are areas that have been determined by the County of Los Angeles to contain sensitive biological resources based on the criteria of sensitive plants and animals, plant communities, and corridors. Often, these SEAs can be indicators of the presence of wildlife movement corridors. The nearest SEA to the project site is Griffith Park, which is located approximately 4.9 miles to the northwest of the project site. There are no migratory corridors located within the project site.

Although there are no known bird rookeries in the site, several species of birds may breed within the area during nesting bird season (February 1-August 31). Non-native trees present at and around the project site have the potential to serve as nesting sites for birds protected under the MBTA.

Ordinances and Local Policies

City of Los Angeles General Plan

The following policies within the City of Los Angeles General Plan are applicable to the development of the proposed project:[7]

- Section 6, Policy 1 states that the City will continue to require evaluation, avoidance, and minimization of potential significant impacts, as well as mitigation of unavoidable significant impacts on sensitive animal and plant species and their habitats and habitat corridors relative to land development activities.
- Section 6, Policy 2 states that the City will continue to administer city-owned and managed properties so as to protect and/or enhance the survival of sensitive plant and animal species to the greatest practical extent.

The proposed project would not conflict with the policies of the General Plan. The evaluation, avoidance, and minimization to potential significant impacts to sensitive and plant animal species and their habitats shall occur as part of the proposed project. City-owned and managed properties involved in the proposed project shall be administered by the City to protect and/or enhance the survival of sensitive plant and animal species to the greatest practical extent.

[7] City of Los Angeles Department of City Planning, 26 September 2001. Conservation Element of the City of Los Angeles General Plan. Contact: City of Los Angeles, Department of City Planning, 200 North Spring Street, Los Angeles, CA 90012.

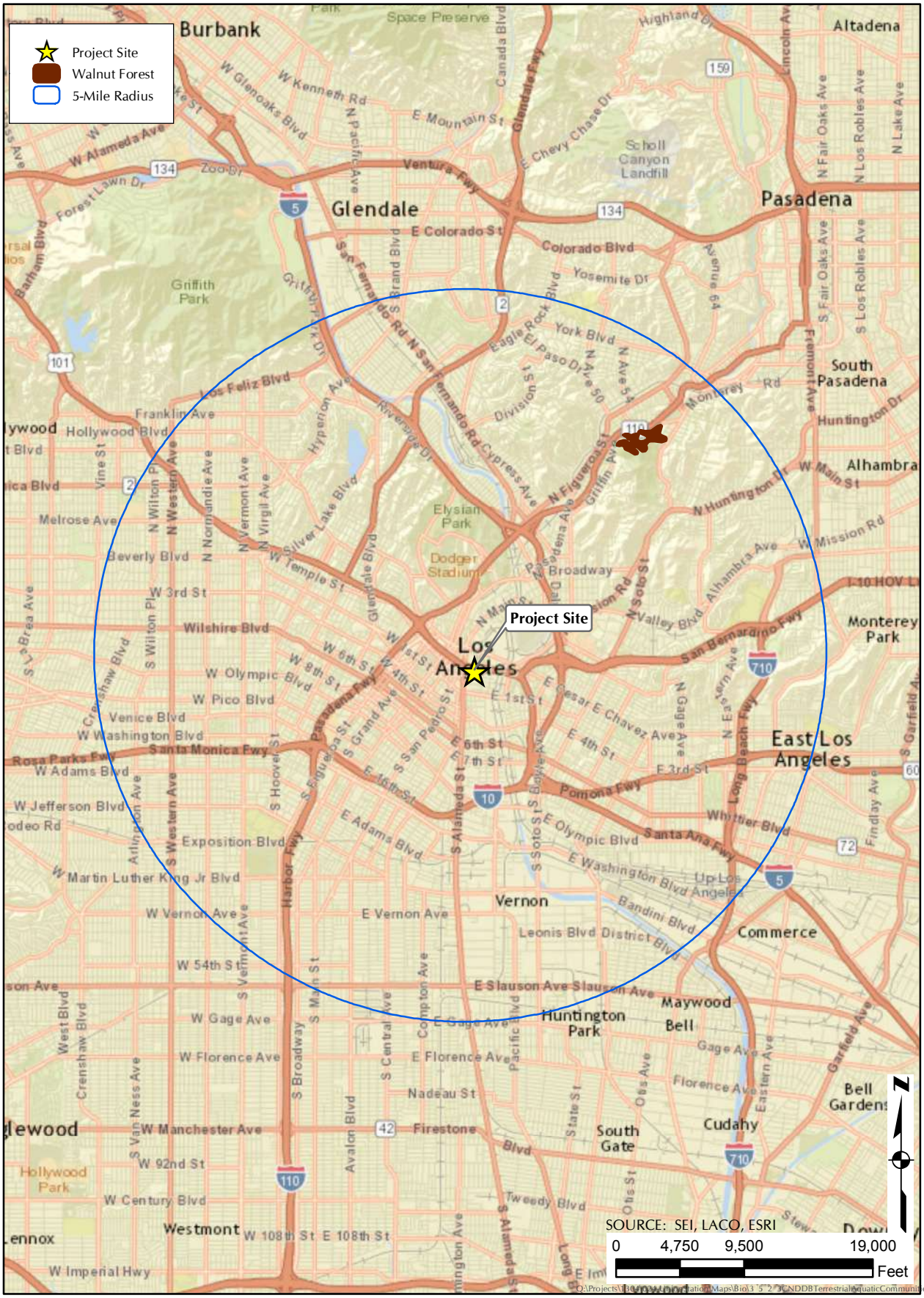


Figure 3.5.2-3. CNDDB 5-Mile Radius for Terrestrial Communities

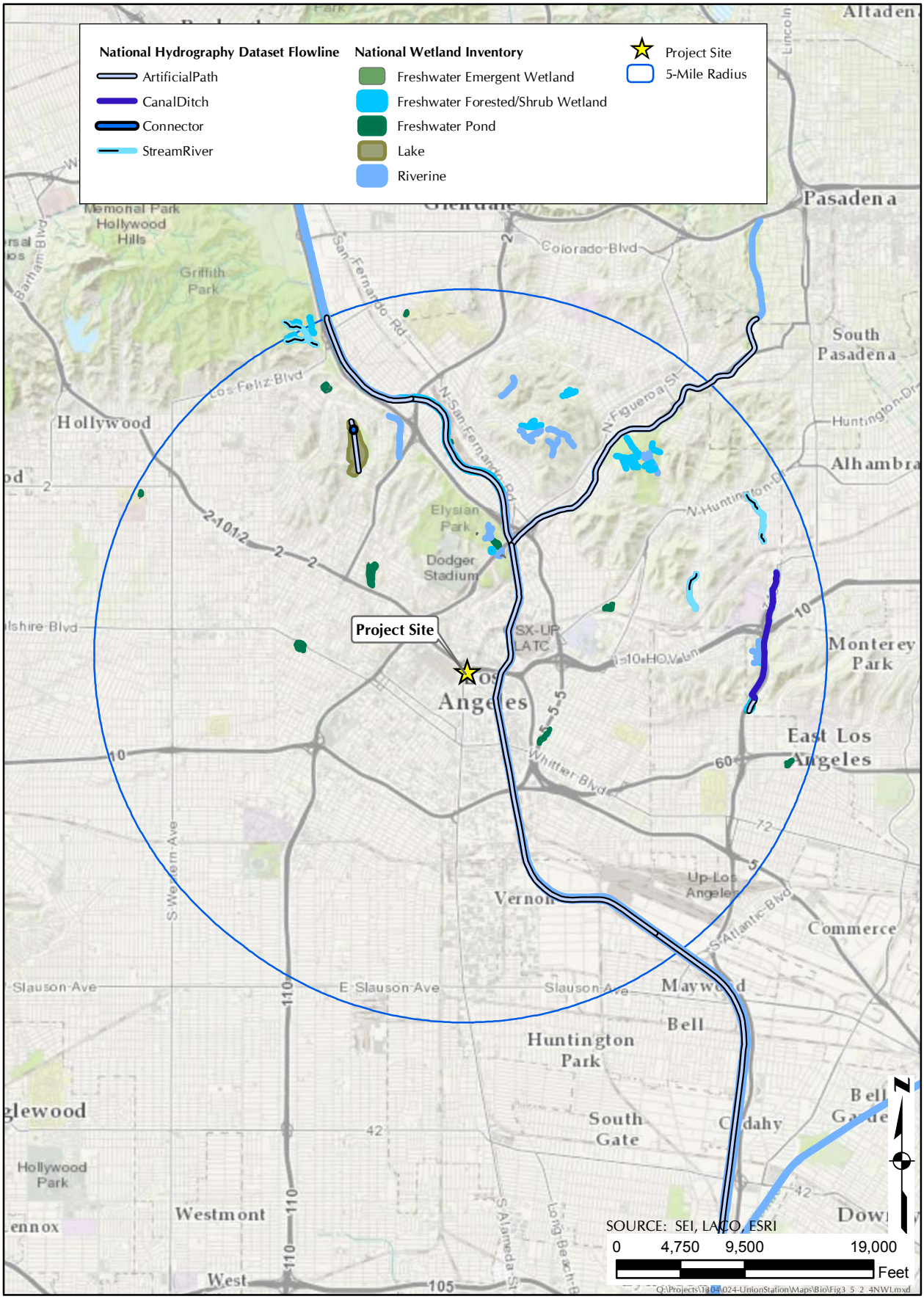


Figure 3.5.2-4. National Wetland Inventory and USGS Blueline Drainages within a 5-Mile Radius of the Project Location.

City of Los Angeles Protected Tree Ordinance

The proposed project does not require the removal of any trees afforded protection under the City of Los Angeles Protected Tree Ordinance. The removal of non-protected street trees would be required during the development of the proposed project. Any street tree removal shall require the acquisition of a street tree removal permit from the City of Los Angeles Bureau of Public Works, Urban Forestry Division (UFD). Trees will be removed and replaced in accordance with the current requirements of the UFD.

Habitat Conservation Plans and Natural Community Conservation Plans

Habitat Conservation Plans (HCPs) and Natural Community Conservation Plans (NCCPs) were evaluated to determine applicability of any adopted or proposed HCPs or NCCPs in the project vicinity. The boundaries of all HCPs/NCCPs were reviewed and compared to the nine USGS 7.5-minute topographic quadrangles surrounding and including the project site to determine their relevance. There are no HCPs or NCCPs with boundaries that intersect the project site.

3.5.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of six questions when addressing the potential for significant impacts to biological resources. Would the proposed project:

(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Listed Species

The proposed project would not result in impacts to biological resources in relation to species listed as rare, threatened, or endangered pursuant to the federal and state ESAs. This determination is based on the habitat requirements and historical occurrences of the listed species with the potential to occur in the proposed project site. Due to the lack of habitats suitable to support the subject species, they have been determined to be absent from the proposed project site. Therefore, there would be no impacts to biological resources related to species listed as rare, threatened, or endangered pursuant to the federal and state ESAs, and mitigation would not be required.

Other Sensitive and Locally Important Species

The proposed project would not result in impacts to biological resources in relation to species recognized by the USFWS, CDFW, or in local regional plans, policies, or regulations as sensitive or special status. This determination is based on the habitat requirements and historical occurrences of the sensitive species with the potential to occur in the proposed project site. Only one species, American peregrine falcon, has the potential to occur at the project site due to the presence of suitable habitat.

However, the nearest historical record of peregrine falcon occurred over 5 miles northeast of the project site. There is no suitable habitat present for any of the remaining sensitive and locally important species identified in the records search. As a result, they have been determined to be absent from the proposed project site. Therefore, there would be no impacts to biological resources related to species recognized by the USFWS or by the CDFW, and mitigation would not be required.

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The proposed project would not result in impacts to biological resources in relation to riparian habitat or other sensitive natural communities. The closest state-designated sensitive community or riparian habitat, Walnut Forest, is located approximately 3.5 miles to the northeast of the project site. Therefore, there would be no impacts to biological resources related to riparian habitat or other sensitive natural communities, and mitigation would not be required.

(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The proposed project would not result in impacts to biological resources in relation to federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means. The closest wetland or blueline drainage is the concrete-lined channel of the Los Angeles River, approximately 0.5 miles east of the project site. The proposed project would not include direct removal, filling, hydrological interruption, or other alterations to the nearby federally protected wetlands or other waters of the United States. Therefore, there would be no impacts to biological resources related to federally protected wetlands as defined by Section 404 of the Clean Water Act, and mitigation would not be required.

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Wildlife Corridors

The proposed project would not result in impacts to biological resources in relation to movement of any migratory fish or wildlife species or with an established wildlife corridor. Suitable habitat is not present to support wildlife movement corridors at the proposed project site. Therefore, there would be no impacts to biological resources related to movement of any migratory fish or wildlife species or with an established wildlife corridor, and mitigation would not be required.

Nursery Sites

The proposed project would have the potential to result in impacts to biological resources in relation to impeding the use of native wildlife nursery sites. Non-native trees within and around the proposed project site have the potential to serve as suitable nesting habitat for native bird species afforded protection pursuant to the MBTA. Development of the proposed project would include the removal of a total of approximately 38 non-native trees. However, a total of approximately 87 trees would be installed as part of the proposed project, for a net increase of approximately 49 trees in the project site. During development of the proposed project, impacts could occur to nesting birds. The consideration of mitigation measures is required.

(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project would not conflict with any local policies or ordinances protecting biological resources. No trees protected by the City of Los Angeles Protected Tree Ordinance would be removed by the proposed project. Removal of other street trees not protected under the ordinance would require the acquisition of a street tree removal permit from the City of Los Angeles Bureau of Public Works, UFD. Trees would be removed and replaced in accordance with the current requirements of the UFD. Therefore, there would be no impact in regard to conflicting with any local policies or ordinances, and mitigation would not be required.

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan?

The proposed project would not result in impacts to biological resources in regard to conflicting with the provisions of an adopted HCP, NCCP, or other approved local, regional, or State Habitat Conservation Plan. There are no HCPs or NCCPs with boundaries that intersect the project site. Therefore, there would be no impact, and mitigation would not be required.

3.5.4 Cumulative Impacts

The State CEQA Guidelines recommend the consideration of six questions when addressing the potential for significant impacts to biological resources. Would the proposed project:

(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The proposed project would result in no impact to biological resources in regard to having a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, the proposed project would

not contribute incrementally to impacts, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, and no mitigation would be required.

(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The proposed project would result in no impact to biological resources in regard to having a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, the proposed project would not contribute incrementally to impacts, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, and no mitigation would be required.

(c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The proposed project would result in no impact to biological resources in regard to having a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. Therefore, the proposed project would not contribute incrementally to impacts, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, and no mitigation would be required.

(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The proposed project would result in no impact to biological resources in regard to interfering substantially with the movement of any migratory fish or wildlife species or with an established wildlife corridor. Therefore, the proposed project would not contribute incrementally to impacts, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, and no mitigation would be required.

The proposed project would have the potential to result in impacts to biological resources in relation to impeding the use of native wildlife nursery sites. Non-native trees within the project site have the potential to serve as suitable nesting habitat for native bird species afforded protection pursuant to the MBTA. Implementation of mitigation measure MM-BIO-1 would reduce impacts to below the level of significance. Sixty-three development projects are located in the vicinity of the proposed project, including Metro projects, residential development, commercial development, bus stop improvements, active transportation corridors, mixed-use projects, and more. Of these, none are expected to increase

potential impacts to nesting migratory birds to above the level of significance. All of these projects are located in the highly developed urban area in the vicinity of the project site, and would require the same mitigation measures included for the proposed project. Therefore, cumulative impacts would be less than significant.

(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The proposed project would result in no impact to biological resources in regard to conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, the proposed project would not contribute incrementally to impacts, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, and no mitigation would be required.

(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan?

The proposed project would result in no impact to biological resources in regard to conflicting with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State Habitat Conservation Plan. Therefore, the proposed project would not contribute incrementally to impacts, when added to the related past, present, or reasonably foreseeable, probable future projects listed in Section 2, *Project Description*, and no mitigation would be required.

3.5.5 Mitigation Measures

To avoid violations of federal and State migratory bird protections and prevent impacts to bird species that may utilize trees in the area affected by the proposed project, or possible rookeries of protected bird species, the following mitigation measure would be implemented:

> **MM-BIO-1:** Whenever feasible, construction shall take place outside of the nesting bird season, which occurs between February 1 and August 31. If construction, ground disturbance, and/or vegetation trimming/removal activities are scheduled to occur during the breeding season, a qualified biologist shall conduct pre-construction breeding bird surveys within thirty (30) days prior to the start of construction, ground disturbance, or vegetation trimming/removal activities to identify the presence of breeding birds protected by the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and the California and federal Endangered Species Acts. If nesting birds are encountered during preconstruction nesting surveys, a 300-foot disturbance-free buffer, pursuant to the MBTA, shall be established around each nest, and no activities shall be allowed within the buffer(s) until the young have fledged from the nest or the nest fails. If for any reason a bird nest must be removed during the nesting season, the applicant shall obtain written documentation from the United States Fish and Wildlife Service and the California Department of Fish and Wildlife authorizing the nest relocation.

3.5.6 Level of Significance after Mitigation

Implementation of mitigation measure MM-BIO-1 would reduce impacts to biological resources in regard to nesting birds afforded protection pursuant to the MBTA to below the level of significance.

There would be no other impact to biological resources.

3.6 Cultural Resources

This section of the Environmental Impact Report (EIR) analyzes potential impacts to cultural resources from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The analysis of cultural resources consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site and its immediate surroundings, anticipated impacts (direct, indirect, and cumulative), mitigation measures and level of significance after mitigation, and alternatives to the proposed project.

Cultural resources were evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines). The analysis of cultural resources is based on the cultural resources technical report (Appendix D, *Cultural Resources Technical Report*). The evaluation of the proposed project considers information contained in published and unpublished literature, including environmental reports prepared by the Gold Line, Westside Subway Extension (renamed Purple Line Extension), and Regional Connector, and review of current and historic maps and aerial photographs to characterize the existing conditions in relation to cultural resources. Existing lists of cultural resources, including the National Register of Historic Places (National Register; NRHP), the California Register of Historical Resources (California Register; CRHR), and City of Los Angeles Historic-Cultural Monuments (Monuments; HCM) were reviewed. Additional coordination was undertaken with the State Office of Historic Preservation, through review at the South Central Coastal Information Center, the Native American Heritage Commission (NAHC), and Native American Tribal contacts identified by the NAHC through Assembly Bill 52 (AB 52) consultation. This work was further supplemented through coordination with the Los Angeles Conservancy, the Chinese American Historical Society, and the Union Station Historical Society. Information regarding paleontological resources was based on review of records at the Los Angeles Natural History Museum and review of Dibblee maps.

3.6.1 Regulatory Setting

Federal

National Historic Preservation Act of 1966

Enacted in 1966, the National Historic Preservation Act (NHPA; Public Law 89-665; 16 U.S. Code [USC] 470 et seq.) declared a national policy of historic preservation and instituted a multifaceted program, administered by the National Park Service (NPS), to encourage the achievement of preservation goals at the federal, state, and local levels. The NHPA authorized the expansion and maintenance of the NRHP, established the position of State Historic Preservation Officer and provided for the designation of State Review Boards, set up a mechanism to certify local governments to carry out the purposes of the NHPA, assisted Native American tribes to preserve their cultural heritage, and created the Advisory Council on Historic Preservation (ACHP). Section 106 of the NHPA states that federal agencies with direct or indirect jurisdiction over federally funded, assisted, or licensed undertakings must take into account the effect of

the undertaking on any historic property that is included in, or eligible for inclusion in, the NRHP, and that the ACHP must be afforded an opportunity to comment, through a process outlined in the ACHP regulations at 36 Code of Federal Regulations (CFR) Part 800, on such undertakings. The 1992 amendments creates tribal preservation offices, add a Native American to the Advisory Council on Historic Preservation, make explicit the eligibility of religious properties for Historic Preservation Fund grants, require the Secretary of the Interior to report to Congress every four years on threats to historic properties, and incorporate portions of the section 106 process.

The NPS administers two federal recognition programs, the NRHP and the National Historic Landmarks Program.

National Register of Historic Places

Working with State Historic Preservation Offices, Tribal Historic Preservation Offices, and Federal Preservation Offices, the NPS maintains the NRHP. This is the official list of properties that are deemed worthy of preservation. Properties listed in the NRHP tell stories that are important to a local community, the citizens of a specific state, or all Americans. Properties listed in the NRHP may be owned by private individuals, universities, non-profits, governments, and/or corporations.

The NRHP was established by the NHPA of 1966 as "an authoritative guide to be used by federal, state, and local governments, private groups, and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment." The NRHP recognizes properties that are significant at the national, state, and local levels. To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. A property is eligible for the NRHP if it is significant under one or more of the following criteria:

- Criterion A: It is associated with events that have made a significant contribution to the broad patterns of our history.
- Criterion B: It is associated with the lives of persons who are significant in our past.
- Criterion C: It embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction.
- Criterion D: It has yielded, or may be likely to yield, information important in prehistory or history.

Cemeteries, birthplaces, or graves of historic figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, and properties that are primarily commemorative in nature are not considered eligible for the NRHP unless they satisfy certain conditions. In general, a resource must be at least 50 years of age to be considered for the NRHP, unless it satisfies a standard of exceptional importance. Properties

listed or eligible for listing in the NRHP are automatically listed in the California Register.

Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards and Guidelines)

The Standards and Guidelines are prepared under the authority of Sections 101(f) (g), and (h), and Section 110 of the NHPA. The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation are standards and guidelines; they are not regulatory and do not set or interpret agency policy. They are intended to provide technical advice about archeological and historic preservation activities and methods. The NPS has not republished "The Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation" since 1983 (48 CFR 44716). NPS has updated portions of the Standards and Guidelines. NPS has officially revised portions and published the revisions in the Federal Register, such as the Historic Preservation Project standards and the treatment definitions. The purposes of the Standards are:

- To organize the information gathered about preservation activities.
- To describe results to be achieved by Federal agencies, States, and others when planning for the identification, evaluation, registration and treatment of historic properties.
- To integrate the diverse efforts of many entities performing historic preservation into a systematic effort to preserve our nation's culture heritage.

Native American Graves Protection and Repatriation Act of 1990

The Native American Graves Protection and Repatriation Act (25 USC 3001; Public Law 101-601) provides the protection and repatriation of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are excavated or discovered on federal or tribal lands, or that are in the possession or control of Federal agencies or museums and institutions that receive federal funds. It amends the illegal trafficking code (Chapter 53 of title 18) to include fines and imprisonment for illegal trafficking in Native American human remains and cultural items. Federal agencies and museums that have possession of or control over the above-mentioned objects are required to compile an inventory and, to the extent possible, identify the geographical and cultural affiliation of the objects, prepare a written summary, and notify the affected Native American tribes or organizations. If the cultural affiliation of Native American human remains and objects is established, upon the request of a known lineal descendant of the Native American or of the tribe or organization, they are to be expeditiously returned with the following provisions: (1) If the items are dispensable for completion of a specific study, the outcome of which would be of major benefit to the United States, they shall be returned within 90 days upon completion of the scientific study. (2) If there are competing claims for repatriation of any cultural items and the Federal agency or museum cannot clearly determine which requesting party is the most appropriate claimant, the agency or museum may retain the item until agreement is reached or the dispute is resolved by a court of competent jurisdiction. The Act provides for the establishment of a committee appointed by the Secretary of the Interior to monitor and review the implementation of the inventory, by representatives of national museum and scientific organizations, and one shall be an appointment approved by the members of the committee. Finally, the

Act contains provisions for grants to Indian tribes and native Hawaiian organizations to assist them in the repatriation process, and to museums to assist them in the inventory and identification process.

State

California Environmental Quality Act

Under CEQA, a project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment. This statutory standard involves a two-part inquiry. The first involves a determination of whether the project involves a historic resource. If so, then the second part involves determining whether the project may involve a "substantial adverse change in the significance" of the resource. To address these issues, guidelines that implement the 1992 statutory amendments relating to historical resources were adopted in final form on October 26, 1998, with the addition of State CEQA Guidelines Section 15064.5. The CEQA Guidelines provide that for the purposes of CEQA compliance, the term "historical resources" shall include the following:

- A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register.
- A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code (PRC) or identified as significant in a historical resource survey meeting the requirements in Section 5024.1(g) of the PRC, shall be presumed to be historically or culturally significant. Public agencies must treat such resources as significant for purposes of CEQA unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets one of the criteria for listing on the California Register.
- The fact that a resource is not listed in, or determined to be eligible for listing in the California Register, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Section 15064.5 of the CEQA Guidelines also provides that "substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." Material impairment occurs when a project alters or demolishes in an adverse

manner “those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion” in a state or local historic registry.

The CEQA Guidelines recommend the consideration of five questions when addressing the potential for significant impacts to cultural resources. Would the proposed project:

(a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?
(b) Cause a substantial adverse change in the significance of an archeological resource pursuant to §15064.5?
(c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?
(d) Disturb any human remains, including those interred outside of dedicated cemeteries?
(e) Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either:
    1) a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, that is listed or eligible for listing on the California Register of Historical Resources, or on a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
    2) a resource determined by a lead agency, in its discretion and supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code section 5024.1 (c), and considering the significance of the resource to a California Native American tribe.

California Register of Historical Resources

The California Register is an authoritative listing and guide to be used by state and local agencies, private groups, and citizens in identifying the existing historical resources of the state and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change. The criteria for eligibility for the California Register are based upon National Register criteria. These criteria are:

- Criterion 1 – Associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California of the United States;
- Criterion 2 – Associated with the lives of persons important to local, California or national history;
- Criterion 3 – Embodies the distinctive characteristics of a type, period, region or method of construction or represents the work of a master or possesses high artistic values; and
- Criterion 4 – Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

The California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the NRHP (Category 1 in the State Inventory of Historical Resources [State Inventory]) and those formally Determined Eligible for listing in the National Register (Category 2 in the State Inventory);
- California Registered Historical Landmarks from No. 0770 onward; and
- Those California Points of Historical Interest that have been evaluated by the Office of Historic Preservation (OHP) and have been recommended to the State Historical Resources Commission for inclusion in the California Register.

Other resources which may be nominated for listing in the California Register include:

- Historical resources with a significance rating of Categories 3 through 5 in the State Inventory. (Categories 3 and 4 refer to potential eligibility for the National Register, while Category 5 indicates a property with local significance);
- Individual historical resources;
- Historical resources contributing to historic districts; and
- Historical resources designated or listed as a local landmark.

Additionally, a historic resource eligible for listing in the California Register must meet one or more of the criteria of significance described above and retain enough of its historic character or appearance to be recognizable as a historic resource and to convey the reasons for its significance. Historical resources that have been rehabilitated or restored may be evaluated for listing.

California Historical Landmarks Registration Program

California Historical Landmarks are sites, buildings, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. The specific standards now in use were first applied in the designation of Landmark #770. California Historical Landmarks #770 and above are automatically listed in the CRHR.

To be designated as a California Historical Landmark, a resource must meet at least one of the criteria listed below; have the approval of the property owner(s); be recommended by the State Historical Resources Commission; and be officially designated by the Director of California State Parks.

Criteria for Designation

To be eligible for designation as a Landmark, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California);

- Associated with an individual or group having a profound influence on the history of California; or
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

Effects of Designation

- Limited protection: Environmental review may be required under CEQA if property is threatened by a project. Contact the local planning agency for more information.
- Local assessor may enter into contract with property owner for property tax reduction (Mills Act).
- Local building inspector must grant code alternative provided under State Historic Building Code. Registration will be recorded on the property deed.
- Automatic listing in California Register.
- Bronze plaque at site (underwritten by local sponsor) ordered through OHP; highway directional sign available through local Department of Transportation (Caltrans) district office.

California Points of Historical Interest

If a site is primarily of local interest, it may meet the criteria for the California Points of Historical Interest Program. California Points of Historical Interest are sites, buildings, features, or events that are of local (city or county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other value. Points of Historical Interest designated after December 1997 and recommended by the State Historical Resources Commission are also listed in the California Register. No historical resource may be designated as both a Landmark and a Point. If a Point is subsequently granted status as a Landmark, the Point designation will be retired.

Criteria for Designation

To be eligible for designation as a Point of Historical Interest, a resource must meet at least one of the following criteria:

- The first, last, only, or most significant of its type within the local geographic region (City or County);
- Associated with an individual or group having a profound influence on the history of the local area; or
- A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in the local region of a pioneer architect, designer or master builder.

Effects of Designation

- Limited protection: Environmental review may be required under CEQA if property is threatened by a project. Contact the local planning agency for more information.
- Local assessor may enter into contract with property owner for property tax reduction (Mills Act).
- Local building inspector must grant code alternative provided under State Historic Building Code.
- Registration is recorded on property deed.
- A small enamel directional sign (no text) available through local Caltrans district office. Owner may place his or her own marker at the site.

California Public Resources Code Sections 5019, 5024, 5024.5, 5025, 5038, 5097.5, 5097.9, 5097.98-99

Section 5019.59 of the PRC was enacted in order to classify State Historic Parks. This section of the PRC defines State Historic Parks as follows:

> Historic units, to be named appropriately and individually, consist of nonmarine areas established primarily to preserve objects of historical, archaeological, and scientific interest, and archaeological sites and places commemorating important persons or historic events. The areas should be of sufficient size, where possible, to encompass a significant proportion of the landscape associated with the historical objects. The only facilities that may be provided are those required for the safety, comfort, and enjoyment of the visitors, such as access, parking, water, sanitation, interpretation, and picnicking. Upon approval by the commission, lands outside the primary historic zone may be selected or acquired, developed, or operated to provide camping facilities within appropriate historical units. Upon approval by the State Park and Recreation Commission, an area outside the primary historic zone may be designated as a recreation zone to provide limited recreational opportunities that will supplement the public's enjoyment of the unit. Certain agricultural, mercantile, or other commercial activities may be permitted if those activities are a part of the history of the individual unit and any developments retain or restore historical authenticity. Historical units shall be named to perpetuate the primary historical theme of the individual units.

Sections 5024 and 5024.5 of the PRC were enacted as part of a larger effort to establish a state program to preserve historical resources. These sections of the code require state agencies to take a number of actions to ensure preservation of state-owned historical resources under their jurisdictions. These actions include evaluating resources for NRHP eligibility and California Historical Landmark eligibility, maintaining an inventory of eligible and listed resources, and managing these historical resources so that that they will retain their historic characteristics.

Section 5028 of the PRC specifies that no structure that is listed in the NRHP, in the CRHR, or in any local public register of historic places, and that has been damaged due to a natural disaster, including, but not

limited to, an earthquake, fire, or flood, may be demolished, destroyed, or significantly altered, except for restoration to preserve or enhance its historical values, unless the structure presents an imminent threat to the public of bodily harm or of damage to adjacent property, or unless the State Office of Historic Preservation determines that the structure may be demolished, destroyed, or significantly altered.

Section 5038 of the PRC was enacted to establish and preserve *El Pueblo de Los Angeles State Historic Park* as a unique historical and cultural resource for the people of the state, the Mexican and early California cultural and interpretive traditions and heritage of El Pueblo de Los Angeles, as well as to promote the restoration and preservation of the landmarks and buildings of the El Pueblo de Los Angeles State Historic Park.

Section 5097.5 of the PRC defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historical, or paleontological resources located on public lands. This section also prohibits the knowing destruction of objects of antiquity without a permit (expressed permission) on public lands, and provides for criminal sanctions. In 1987, it was amended to require consultation with the California NAHC whenever Native American graves are found. It also established that violations for taking or possessing remains or artifacts are felonies.

PRC Section 5097.9 establishes the California NAHC to make recommendations to encourage private property owners to protect and preserve sacred places in a natural state and to allow appropriate access to Native Americans for ceremonial or spiritual activities. The Commission is authorized to assist Native Americans in obtaining appropriate access to sacred places on public lands, and to aid State agencies in any negotiations with federal agencies for the protection of Native American sacred places on federally administered lands in California.

PRC Sections 5097.98 through 5097.99 requires that the California NAHC be consulted whenever Native American graves are found. According to these Sections, it is illegal to take or possess remains or artifacts taken from Native American graves; however, it does not apply to materials taken before 1984. Violations occurring after January 1, 1988, are felonies.

California Native American Graves Protection and Repatriation Act of 2001 (Health and Safety Code [HSC] 8010-8011)

This Act was established in 2001 to provide a seamless and consistent state policy to ensure California Native American human remains and cultural items be treated with dignity and respect. This act aligns with the provisions set forth in the Federal Native American Graves Protection and Repatriation Act of 1990.

Health and Safety Code, Sections 7050 and Sections 18950 through 18961

Consistent with the provisions of Section 50907.9 of the PRC, Section 7050 of the HSC authorizes the NAHC to regulate Native American concerns regarding the excavation and disposition of Native

American cultural resources. Among its duties, the Commission is authorized to resolve disputes relating to the treatment and disposition of Native American human remains and items associated with burials. Upon notification of the discovery of human remains by a county coroner, the Commission notifies the Native American group or individual most likely descended from the deceased.

The State Historic Building Code (Sections 18950-18961) provide alternative building regulations and building standards for the rehabilitation, preservation, restoration (including related reconstruction), or relocation of buildings or structures designated as historic buildings. Such alternative building standards and building regulations are intended to facilitate the restoration or change of occupancy so as to preserve their original or restored architectural elements and features, to encourage energy conservation and a cost-effective approach to preservation, and to provide for the safety of the building occupants.

California Penal Code Section 622 – Destruction of Historical Properties

This section of the California Penal Code makes it a misdemeanor for anyone (except the owner) to willfully injure or destroy anything of archaeological interest or value whether on private lands or within any public park or place. In addition, Penal Code Section 622.5 sets the penalties for the damage or removal of cultural resources.

Assembly Bill 52

AB 52 creates a new category of environmental resources that must be considered under CEQA: "tribal cultural resources." AB 52 is applicable to a project for which a Notice of Preparation (NOP) is filed on or after July 2015.

AB 52 adds tribal cultural resources to the categories of cultural resources in CEQA, which had formerly been limited to historic, archaeological, and paleontological resources. "Tribal cultural resources" are defined as either (1) "sites, features, places cultural landscapes, sacred places and objects with cultural value to a California Native American tribe" that are included in the state register of historical resources or a local register of historical resources, or that are determined to be eligible for inclusion in the state register; or (2) resources determined by the lead agency, in its discretion, to be significant based on the criteria for listing in the state register.

Recognizing that tribes may have expertise with regard to their tribal history and practices, AB 52 requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if they have requested notice of projects proposed within that area. If the tribe requests consultation within 30 days upon receipt of the notice, the lead agency must consult with the tribe. Consultation may include discussing the type of environmental review necessary, the significance of tribal cultural resources, the significance of the project's impacts on the tribal cultural resources, and alternatives and mitigation measures recommended by the tribe.

The parties must consult in good faith, and consultation is deemed concluded when either the parties agree to measures to mitigate or avoid a significant effect on a tribal cultural resource (if such a significant effect exists) or when a party concludes that mutual agreement cannot be reached.

Regional

Part 28 - Historic Preservation Ordinance 22.52.3000 (Ord. 2015-0033 § 3, 2015)

The County of Los Angeles adopted this ordinance to establish the County of Los Angeles Register of Landmarks and Historic Districts, the criteria for designation and the process for designation. The purpose of this ordinance was to enhance and preserve the County's distinctive historic, architectural and landscape characteristics; foster community pride; positively affect property values throughout the county; further establish the County as a tourist destination and business location; recognize local historic resources as an economic asset and promote continued reuse of these historic resources; and specify criteria and procedures for designation provide for the ongoing preservation and maintenance of historic resources.

Local

City of Los Angeles General Plan (Section 3)

The City of Los Angeles General Plan outlines the policy of the city to protect the local archaeological and paleontological resources for historical, cultural research and/or educational purposes. The General Plan establishes that the City of Los Angeles will continue to identify and protect significant archaeological and paleontological sites and/or resources known to exist or that is identified during the course of activities for modification to property and landscape.

City of Los Angeles Historic-Cultural Monuments

The City of Los Angeles Cultural Heritage Ordinance, enacted in 1962, made possible the designation of buildings and sites as individual local landmarks, called Historic-Cultural Monuments (HCMs). Designation as an HCM recognizes the building, structure, site, or plant life as important to the history of the city, state, or nation; provides eligibility for the Mills Act program, provides a Historical Property Contract that can result in a property tax reduction; and permits use of the California Historical Building Code.

To be designated as an HCM, a resource must meet at least one of the criteria listed below; approval by the property owner(s) is not required; be recommended by the Cultural Heritage Commission and the Planning and Land Use Management Committee; and be officially designated by the City Council.

Criteria for Designation

An HCM is any site (including significant trees or other plant life located thereon), building, or structure of particular historical or cultural significance to the City of Los Angeles, such as historic structures or sites:

- In which the broad cultural, political, economic, or social history of the nation, state, or community is reflected or exemplified; or
- Which are identified with historic personages or with important events in the main currents of national, state, or local history; or
- Which embody the distinguishing characteristics of an architectural-type specimen, inherently valuable for a study of a period, style, or method of construction; or
- Which are a notable work of a master builder, designer, or architect whose individual genius influenced his or her age.

Effects of Designation

- Requires Cultural Heritage Commission review for proposed exterior and interior alterations in accordance with the Secretary of the Interior's *Standards for Rehabilitation*, the nationally accepted criteria for evaluating change to historic properties;
- Allows the Cultural Heritage Commission to object to the issuance of a demolition permit for 180 days, with an additional 180 day extension possible upon approval of the City Council, thereby granting up to 360 days stay of demolition in order to evaluate preservation alternatives;
- Activates the California Environmental Quality Act which protects historic buildings from adverse impacts without environmental review;
- Entitles Historic-Cultural Monument owners to technical assistance in complying with the Secretary of the Interior's *Standards for the Treatment of Historic Properties*; and
- Fosters civic pride in neighborhoods and business districts and helps develop a sense of place and time.

3.6.2 Affected Environment/Existing Conditions

This section provides the existing condition setting for significant cultural resources in the project site and its immediate surroundings. This section includes information on the baseline conditions for paleontological, archaeological, and historic architectural resources.

Paleontological Resources

The project site is located within the central area of Los Angeles in the Los Angeles Basin. The Los Angeles Basin separates the Peninsular Ranges from the Transverse Ranges. Los Angeles Union Station lies within a geological formation referred to as the basin's central block. The project site has a gently sloping landscape. Elevation within the project site ranges from approximately 280 to 300 feet above

mean sea level (MSL). The Los Angeles Basin is a coastal lowland area, whose floor is marked by elongated low ridges and groups of hills that are located on the edge of the Pacific tectonic plate. On the north, northeast, and east, the basin is bound by the San Gabriel Mountains and Puente, Elysian, and Repetto Hills. To the southeast, it is bordered by the Santa Ana Mountains and the San Joaquin Hills. The western boundary of the basin is marked by the Continental Borderland and is part of the onshore portion. The basin surface slopes gently south or seaward, but is interrupted by the Coyote Hills near the northeastern edge, by a line of elongated low hills and mesas to the south and west, and by the Palos Verdes peninsula at the southwest extremity.[1]

The basin is underlain by Quaternary non-marine deposits, Pleistocene marine and terrace deposits, and clastic sedimentary rocks of Late Cretaceous through Pleistocene age and inter-bedded volcanic rocks of middle Miocene age. Geologic mapping of the area indicates that existing and proposed development areas are generally underlain by recent alluvium (Qal) and Pleistocene sediments. A review of geologic maps for the Los Angeles Basin indicates that Upper Miocene marine (Mu) deposits are adjacent to the project site and may underlie the recent alluvium in the project site (see Figure 3.8.2-1, *Geologic Formations*, in Section 3.8, *Geology and Soils*).[2] The recent alluvium has a low potential to yield unique paleontological resources, thus representing a low paleontological sensitivity. However, the older Pleistocene sediments in the area have yielded vertebrate localities, containing unique paleontological resources; therefore, the older Pleistocence sediments have a high sensitivity for paleontological resources. Similarly, marine deposits, such as the Fernando Formation, a fossiliferous rock unit dating to the Pliocene Epoch (more than 2 million years before present) also have a high sensitivity for paleontological resources. The depth below the ground surface to encounter older Pleistocene sediments and the Fernando Formation are not known.[3]

A record search request was submitted on April 14, 2016, to the Vertebrate Paleontology section of the Natural History Museum of Los Angeles County to perform a paleontological collections record search to locate fossil localities within and in the immediate vicinity of the project site. The record search revealed that there are no previously recorded vertebrate fossil localities that lie directly within the project site. However, the record search revealed documentation of vertebrate localities, the comparable sedimentary units approximately 1.3 miles (2.1 km) from the project site, indicating the potential for such resources to be encountered during excavations in underlying formations.[4]

Surficial sediments throughout the entire area consist of younger Quaternary Alluvium, derived as fluvial deposits from the floodplain of the Los Angeles River nearby to the east. These deposits typically do not

[1] See http://www.laalmanac.com/government/gl01maps.htm; accessed 26 June 2017.

[2] See ftp://ftp.consrv.ca.gov/pub/dmg/pubs/gam/GAM_008_Los_Angeles/GAM_008_Map_1969.pdf; accessed 26 June 2017.

[3] Federal Railroad Administration, United States. 2005. Los Angeles Union Station Run-through Tracks Project: Environmental Impact Statement. Northwestern University.

[4] McLeod, Samuel A., Natural History Museum of Los Angeles County. 2 May 2016. "Vertebrate Paleontology Records Search for paleontological resources for the proposed LA Union Station MP Project, Job Number: 1304-019, in the City of Los Angeles, Los Angeles County, project area." Letter response Dustin Keeler, Sapphos Environmental, Inc., Pasadena, CA.

contain significant vertebrate fossils, at least in the uppermost layers, but at relatively shallow depth they may be underlain with older sedimentary deposits that do contain significant vertebrate fossils. The closest vertebrate fossil locality from older Quaternary deposits beneath the younger Quaternary Alluvium is LACM 2032, approximately 1.3 miles (2.1 km) east of the project site, near the intersection of Mission Road and Daly Street on the eastern side of the Golden State Freeway (Interstate 5), that produced fossil specimens of pond turtle (*Clemmys mamorata*), ground sloth (*Paramylodon harlani*), mastodon (*Mammut americanum*), mammoth (*Mammuthus imperator*), horse (*Equus*), and camel (*Camelops*), at a depth of 15 feet below the surface. The pond turtle specimens from locality LACM 2032 were published in the scientific literature by B.H. Brattstrom and A. Sturn.[5] Approximately 1.4 miles (2.2 km) from the project site, just north of locality LACM 2032, near the intersection of Workman Street and Alhambra Avenue, excavations for a storm drain recovered fossil specimens of turkey (*Meleagris californicus*), sabre-toothed cat (S*milodon fatalis*), horse, and deer (*Odocoileus*), at an unstated depth. A specimen of the turkey from this locality was published in the scientific literature by D. W. Steadman.[6]

Five other locations have shown fossiliferous sediments in the area. Locality LACM 4726, situated 1.5 miles (2.4 kilometers) west of Los Angeles Union Station, yielded fish fossils from the marine Fernando Formation that underlay Recent alluvium at this location similar to the project site. Locality LACM 3868, situated 2 miles (3.2 kilometers) west-northwest of Los Angeles Union Station, yielded fish fossils from the Fernando Formation. Locality LACM 3250, situated 2 miles (3.2 kilometers) northwest of Los Angeles Union Station, yielded fossil remains of extinct mammoth from subsurface Pleistocene older alluvium overlain by recent alluvium. Localities LACM 1198 and LACM 7137, located 5 miles (8 kilometers) west-northwest from Los Angeles Union Station, yielded fossil remains of mastodon, camel, and bison from Pleistocene older alluvium.

There is the potential for Pleistocene and Miocene sediments to be present in the subsurface in and around the project site, but it is not known at what depth below the surface they may occur.

Historic Architectural Resources

See Appendix D, *Cultural Resources Technical Report*, for cultural, ethnohistoric, and historic context and the identification methodology and results.

Significant Historic and Architectural Resources Identified

The record search results and the findings of the Los Angeles Union Station Link US Project EIR/EIS identified a number of historic and architectural resources within the project area:

[5] Sturn A. 1959. A new species of fossil turtle from the Pliocene of Oregon, with notes on other fossil Clemmys from western North America. Bulletin of the Southern California Academy of Sciences, 58(2):65-71

[6] Steadman, D. W. 1980. A Review of the Osteology and Paleontology of Turkeys (Aves: Meleagridinae). Contributions in Science, Natural History Museum of Los Angeles County, 330:131-207

- Seven individual resources listed in the NRHP/CRHR;
- Three properties previously determined eligible for listing in the NRHP/CRHR;
- One property previously found eligible for listing in the NRHP/CRHR; and
- Thirteen properties previously determined ineligible for listing in the NRHP/CRHR.

None of these previously identified buildings and structures constitutes a Tribal Cultural Resource as defined by AB 52.

Properties Previously Listed in the NRHP/CRHR

The cultural resource records search identified two properties that were previously listed in the NRHP that are located within the project site: El Pueblo de Los Angeles (19-167020) and Los Angeles Union Passenger Terminal (19-171159).

Los Angeles Union Passenger Terminal (LAUPT or Los Angeles Union Station)

Los Angeles Union Station, located at 800 N. Alameda Street, was constructed between 1936 and 1939. Los Angeles Union Station was listed in the NRHP on November 13, 1980, under Criterion C and is significant on the national level, and was designated as a Monument (HCM No. 101) on August 2, 1972. The Monument boundary includes the project site; whereas the National Register nomination does not. The HCM designation includes the passenger terminal building and attached service buildings, and the parking lots that front Alameda Street but excludes the railroad tracks east of the terminal buildings. Five buildings and structures are located within the Los Angeles Union Station boundary and are contributing features of the NRHP-listed property: Los Angeles Union Station, Terminal Tower, Macy Street Undercrossing, Vignes Street Undercrossing, and the Car Repair/Supply Shop. Los Angeles Union Station was documented for the Historic American Building Survey (HABS; Survey No. CA-2-258-A) as mitigation for the Metro Red Line Project.

The project site includes the viewshed of the west façade of the historic Union Station Terminal, a sidewalk and paved fire access road along the west façade, 70 iconic palm trees, landscaped planters flanking the north and south pedestrian paths and a historic entry plaza with sundial leading to the main entrance of the historic Union Station Terminal, a sidewalk along the parking lot and eastern façade of the La Petite Academy/First 5 LA building, and a paved parking lot at Los Angeles Union Station. Ten of the paired palm trees located directly in front of the historic Union Station Terminal building were planted in 1939 as part of the original design; the remaining 22 paired palm trees that parallel the west façade of the Union Station Terminal building, as well as the eight parallel rows of six palm trees, were installed in the mid- to late 1990s and are now considered a character-defining feature of the historical

resource.[7] Although the palm trees contribute to the viewshed of Los Angeles Union Station, they were not identified as character-defining features in the Monument application.

Los Angeles Union Station Buildings, Passenger Platforms, Canopies, and Tracks. The NRHP nomination includes the main buildings that constitute the passenger terminal and associated service areas, the passenger platforms, canopies, and railroad tracks. Los Angeles Union Station is significant for its historical association with the development of railroad transportation and for the quality of its architectural design.

Built when rail service was on the decline, Los Angeles Union Station is considered the last of the great rail stations and was known as the "Grand Finale of the Golden Age of Railroads in America." The Spanish Colonial Revival style of architecture was chosen for the design of the station as a reference to California's Spanish history, but was modernized with Art Deco and Streamline Moderne design elements.[8] Los Angeles Union Station was designed by Parkinson and Parkinson, John and Donald Parkinson, master architects noted for other works such as Los Angeles City Hall (HCM No. 150) and Bullocks-Wilshire Department Store (HCM No. 56).[9] Other contributors to the design of Los Angeles Union Station included Edward Allen Hoak, chief designer for the firm of Parkinson and Parkinson; railroad company architects H.L. Gilman, J.H. Christie and R.J. Wirth; landscape architect Tommy Tomson; color and interior design consultant Herman Sachs; and Fred Harvey designer Mary Colter.[10]

Los Angeles Union Station is located within an urban environment on an approximately 45-acre site. The project site extends west of the western curb of Alameda Street, East Cesar E. Chavez Avenue to the north, Los Angeles Union Station to the east, and Arcadia Street to the south. Neighboring uses include El Pueblo de Los Angeles, the remaining historic core of the original city; Chinatown and Little Tokyo; multi-story residential and commercial buildings flanked by paved surface parking lots; Patsaouras Travel Plaza; the East Portal; and Metro's Gateway's Building and the Metropolitan Water District's (MWD's) building. The multi-story residential, commercial, and office buildings located within the NRHP boundary were largely constructed in the early 2000s, do not contribute to the NRHP-listed property, and compromise the historic property's integrity of setting.

Terminal Tower. Union Station Terminal Tower (Terminal Tower), an interlocking tower, served Southern Pacific Railroad, Union Pacific Railroad, and Atchison, Topeka & Santa Fe (AT&SF) Railway. It is located at the throat of Los Angeles Union Station's railyard at 314 Bouchet Street. Constructed in concert with Los Angeles Union Station in 1938, Terminal Tower is an integral component for managing

[7] Grace, Michael L. 5 May 2014. *75th Anniversary of Los Angeles Union Station…* Available at: http://cruiselinehistory.com/75th-anniversary-of-los-angeles-union-station-in-the-1950s-kim-novak-arrived-aboard-the-southern-pacifics-golden-state-alan-ladd-and-virginia-leith-travelled-aboard-the-santa-fes-su/

[8] Ruben Lovret, 1980, National Register of Historic Places Inventory-Nomination Form. Available at: http://focus.nps.gov/pdfhost/docs/NRHP/Text/80000811.pdf

[9] David Gebhard and Robert Winter, 2003, *An Architectural Guidebook to Los Angeles*. Gibbs Smith: Salt Lake City.

[10] Architectural Resources Group, Inc., 2014, Los Angeles Union Station Historic Structures Report.

train travel by allowing trains to change tracks. Terminal Tower is a three-story Spanish Colonial Revival style building. Terminal Tower was included in the Los Angeles Union Station NRHP nomination; however, it was not identified as a character-defining feature of the historic property.

Terminal Tower was taken out of service when control was centralized in Pomona in 1997. The building is now used for storage and maintenance activities. Although not used for its original purpose, Terminal Tower is an integral component of the Los Angeles Union Station complex through its architectural design, and is a contributing feature of the NRHP-listed historic property. Terminal Tower is located outside of the project site.

Macy Street Undercrossing. The Macy Street (now East Cesar E. Chavez Avenue) Undercrossing (Bridge No. 53C-0131) is significant because it carries vehicular traffic under the railroad tracks. The Macy Street Undercrossing is a cast-concrete structure that allows four lanes of vehicle traffic to flow uninterrupted. Its design is similar to the Vignes Street Undercrossing and the Los Angeles Union Station retaining walls.

Macy Street Undercrossing was designed by Merrill Butler, City of Los Angeles Bureau of Engineering. Butler is known is for his graceful bridge designs that reflected the City Beautiful Movement, notably the 6th Street Viaduct, and is considered a master engineer. As an integral component of the Los Angeles Union Station complex, the Macy Street Undercrossing is a contributing feature of the NRHP-listed historic property. The Macy Street Undercrossing is located outside of the project site.

Vignes Street Undercrossing. The Vignes Street Undercrossing (Bridge No. 53C-1764) also carries vehicular traffic under the railroad tracks. The Vignes Street Undercrossing is similar in design and functions as the Macy Street Undercrossing, and was designed by Merrill Butler. As an integral component of the Los Angeles Union Station complex, the Vignes Street Undercrossing is a contributing feature of the NRHP-listed historic property.The Vignes Street Undercrossing was constructed as part of LAPT, but technically is located immediately north of the LAPT historic property boundary and outside of the project site.

Car Repair/Supply Shop. The Car Repair/Supply Shop was built in 1937 and is located near the intersection of East Cesar E. Chavez Avenue (formerly Macy Street) and Avila Street. Although utilitarian in design, the building has continuously been used to support the railroads which service Los Angeles Union Station. Therefore, the Car Repair/Supply Shop is an integral component of the Los Angeles Union Station complex, and is a contributing feature of the NRHP-listed historic property. The Car Repair/Supply Shop is located outside of the project site.

U.S. Post Office Terminal Annex Building (Terminal Annex). Terminal Annex was built in 1938 and is located near the intersection of East Cesar E. Chavez Avenue and Alameda Street. The building reflects an

eclectic mix of architectural styles: Mission and Spanish Colonial Revival with elements of Pueblo and Islamic.[11] Terminal Annex is listed in the NRHP and is located outside the project site.

El Pueblo de Los Angeles

El Pueblo de Los Angeles (19-167020; HCM No. 64) is a State Historic Park that was listed in the National Register in 1981, and includes the following buildings: Plaza House (Garnier Block) located at 507 – 11 N. Main Street; Vickrey/Brunswig Building located at 501 N. Main Street; Brunswig Annex located at 502 New High Street and 111 Republic Street (demolished); Plaza Community Center (Biscailuz Building) located at 125 Paseo de la Plaza; Plaza Methodist Church located at 115 Paseo de la Plaza; and Plaza Community Center (Biscailuz Building) located at 125 Paseo de la Plaza.[12] El Pueblo de Los Angeles is located within the project site.

Plaza House (Garnier Block). The Plaza House was first listed in the National Register as a contributing feature of a historic district in 1972. The rectangular, two-story brick building was constructed in 1883 for Phillipe Garnier. As originally constructed, the building housed a hotel and commercial enterprises. Much of the historic ornamentation was removed as a result of the 1971 San Fernando earthquake. The Plaza House is located outside of the project site, but will be taken into consideration in the Area of Potential Effects (APE), to facilitate evaluation of the setting.

Vickrey/Brunswig Building. The five-story brick and concrete (plus basement) Vickrey/Brunswig Building was constructed in 1888 by Ofield Vickrey. The commercial building was designed by R.B. Young and features distinctive window types for each floor. Similar to the Plaza House, much of the ornamentation was removed following the 1971 earthquake. The Vickrey/Brunswig Building is located outside of the project site, but will be taken into consideration in the APE, to facilitate evaluation of the setting.

Brunswig Annex. The two-story, brick Brunswig Annex building was constructed in 1897 and a third-floor addition was constructed in the early twentieth century. The brick work of the third floor is visually different than the original building. The building is four bays deep and features arched windows with simple brick lintels. The cornice was also removed following the 1971 earthquake and the building has been subsequently demolished.

Plaza Community Center (Biscailuz Building). The Plaza Community Center is a four-and-a-half story concrete building that was constructed in 1926. The commercial building is nine bays wide and 15 bays deep. The ground floor features an arched arcaded walkway with a central primary entrance. The fenestration consists of trios of casement with simple transoms or decorative lintels and plain sills. The building was altered in the 1960s to make it appear more reflect the Spanish Colonial style of architecture.

[11] Beland/Associates, Inc.. April 1984. National Register of Historic Places Inventory – Nomination Form for U.S. Post Office/Los Angeles Terminal Annex Post Office.

[12] Miller, John, Blaine Mallory, Jean Bruce Poole, Katherine A. Peters. May 1981. "National Register of Historic Places Inventory – Nomination Form for El Pueblo de Los Angeles State Historic Park District." On file at SCCIC.

Plaza Methodist Church. The three-story Plaza Methodist Church was built in the Churrigueresque style. The primary façade features three bays, a central apse flanked by two naves, and is heavily ornamented with garlands, bosses, finials, and panels with spires and an onion dome.

The Los Angeles Plaza Park (HCM No. 64) is bounded by East Cesar E. Chavez Avenue, Los Angeles Street, N. Main Street, and Plaza Park. The Plaza Park is located within the El Pueblo de Los Angeles State Historic Park District, and also features a large central gazebo. Other associated buildings include the Nuestra Sonora la Reina de Los Angeles (Plaza Church; HCM No. 3). The Plaza Church is located outside of the project site.

Properties Previously Determined Eligible for Listing in the NRHP/CRHR

First Street Viaduct (Bridge No. 53C-166)

The First Street Viaduct (Caltrans Bridge No. 53C-1166) was built in 1929 and features neoclassical details. Designed by Merrill Butler, the viaduct carries vehicular traffic over the BNSF and UPRR tracks and the Los Angeles River.[13] The First Street Viaduct is eligible for listing in the NRHP and is located outside the project site.

AT&SF Railway Redondo Junction Master Mechanic & Locomotive Supervisors Offices (AT&SF Railway Offices)

The AT&SF Railway Offices were demolished, and the site of the AT&SF Railway Offices is located outside of the project site.

Mission Tower

Mission Tower was determined eligible for listing in the NRHP under Criteria A and C as a result of the LAUS Run-Through Tracks Project (now Link US Project) for its association with railroad travel and for its unique architecture. Mission Tower is a two-story Spanish Colonial Revival style building that works in tandem with Terminal Tower for controlling train traffic. The State Historic Preservation Officer concurred with this finding by letter dated January 15, 2004.[14] Mission Tower is located outside of the project site.

[13] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

[14] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

Properties Previously Found Eligible for listing in the NRHP/CRHR

Los Angeles County Men's Central Jail

The Jail was found eligible for listing in the NRHP/CRHR under Criterion D.[15] The Jail consists of eight buildings and structures constructed between the 1960s and 1990s. The main building is multi-story, Brutalist, and cast concrete. The site of the Jail has housed numerous businesses and functions since Los Angeles was established, and may yield significant information regarding our understanding of human history. The Jail is located outside of the project site.

Properties Previously Determined Ineligible for Listing in the NRHP/CRHR

U.S. 101 Bridge (Bridge No. 53-0405)

The U.S. 101 Bridge was originally constructed as a concrete, open-spandrel arch bridge; however, some of the arches have been filled in as a result of a seismic retrofitting project.[16] Located outside the project site.

Amay's Bakery and Noodle Company (837 Commercial Street)

Amay's Bakery and Noodle Company is a one-story utilitarian industrial building.[17] Located outside the project site.

New York Junk Company (622 Frontage Road/825 Commercial Street)

Two building comprise the New York Junk Company: a one-story masonry industrial building and a one-story masonry building situated on the rear of the parcel.[18] Located outside the project site.

Kahn-Beck Company/Friedman Bag Company – Textile Division (Kahn-Beck Company; 600-620 Center Street/801-817 Commercial Street)

The Kahn-Beck Company building is a three-story brick masonry building constructed in 1920. The building was substantially altered with an addition in 1954 and a renovation in 1968.[19] Located outside the project site.

[15] Jeannette McKenna et al, 2015, A Cultural Resources Investigation of the Los Angeles County Central Men's Jail Complex at 441 Bauchet Street, Los Angeles, Los Angeles County, California.

[16] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

[17] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

[18] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

[19] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

Thomas R. Barrabee Store and Warehouse (611-615 Ducommun Street)

The Barrabee Store and Warehouse is a two-story commercial/industrial building with patterned brick exterior walls.[20] Located outside the project site.

Los Angeles Casing Company (710-714 Ducommun Street)

The Los Angeles Casing Company is a two-story Mission Revival style warehouse.[21] Located outside the project site.

Los Angeles Unified School District (LAUSD) District H Facilities, Services, Maintenance, and Operations Center (Center; 611 Jackson Street)

The LAUSD Center consists of an Administration Building and five storage warehouses. The Administration Building features stucco siding and a low-pitched roof. The LAUSD Center is enclosed with security fencing.[22] Located outside the project site.

Los Angeles Department of Water and Power (LADWP) Parking Structure (301 N. Garey Street)

The LADWP parking structure is a utilitarian cast concrete structure with brick accent. Located outside the project site.

Warehouse (620 Ducommun Street)

The two-story utilitarian warehouse is clad in stucco with pilaster accents. Located outside the project site.

Friedman Bag Company (706 Ducommun Street)

The Friedman Bag Company is a one-story concrete building designed by Earl G. Boehm in 1958.[23] Located outside the project site.

[20] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

[21] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

[22] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

[23] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

Friedman Bag Company (711 Ducommun Street)

The Friedman Bag Company is a one-story concrete building desgined by Reisbord and Caris in 1966.[24] Located outside the project site.

Food Processing Plant (411 Center Street)

The two-story utilitarian building features concrete panels and minimal detail. Located outside the project site.

Manly Oil/Former Southern California Gas Company (410 Center Street)

The site consists of three simple utilitarian buildings. Located outside the project site.

Archaeological Resources

See Appendix B, *Cultural Resources Technical Report*, for cultural, ethnohistoric, and historic context and the identification methodology and results.

Properties Previously Recommended for Listing in the National Register

CA-LAN-1575/H

This multicomponent site consists of the ca. 1860–1930s Chinatown and a Native American cemetery. Much of the site is under extant structures associated with Los Angeles Union Station. Monitoring of construction for the Metro Red Line Subway revealed substantial deposits of Chinese artifacts, architectural remains, and other cultural features. CA-LAN-1575H was originally recorded by John Foster of Greenwood and Associates in 1989 during archaeological monitoring efforts associated with the Metro Red Line Subway Project. Mechanical excavations by Applied EarthWorks, Inc. for the MWD Headquarters discovered historical features including hundreds of privies, wells, and structural foundations. Mechanical excavations and archaeological monitoring by Applied EarthWorks, Inc. for the construction of the Headstart Building in the southwest corner of the Los Angeles Union Station parking lot and the Mozaic at Union Station Apartments to the north of Los Angeles Union Station led to the documentation of 11 historic features. These features included refuse deposits, wood structural remains, and wood conduits associated primarily with Chinese artifacts.

The Los Angeles Union Station site was the location of Old Chinatown from the 1870s until the early 1900s. Continuous settlement by Chinese immigrants began in 1857, and by 1870, an identifiable “Chinatown” of approximately 200 people was situated on Calle de Los Negros between El Pueblo Plaza and Old Arcadia Street.

[24] California Department of Transportation and U.S. Department of Transportation Federal Railroad Administration. 2004. Los Angeles Union Station Run-Through Tracks EIS. Prepared by: Jones & Stokes.

A prehistoric Native American cemetery was discovered during monitoring in the northwestern corner of the 4.3-acre parcel that was excavated for an underground parking facility. The site is immediately southeast of Los Angeles Union Station across Alameda Street from El Pueblo de Los Angeles. The fill overlaying the site from the 1930s construction of the Los Angeles Union Station complex ranges from 1 to 3 feet under the asphalt parking lot, garage structure, and courtyard areas, and up to 24 feet under the raised track area along the east side of the parcel. The cemetery contained 23 features, seven cottonwood projectile points, shell and stone beads, a steatite bowl, and a stone pipe fragment. The cemetery may have been associated with the ethnohistoric village of Yaanga, which was reportedly located in the vicinity of El Pueblo de Los Angeles. Radiocarbon dates from material within the features of the cemetery range from 1,000 before present (B.P.) to 130 B.P. Five of the burials were interments that dated between 1,000 B.P. and 150 B.P. The two most recent burials, dated to 130 and 140 B.P., were cremations.

Early consultation with SHPO by the Link US team has suggested that the site is eligible for NRHP. The site is therefore also considered a Tribal Cultural Resource under CEQA.

CA-LAN- 887/H

This historic site on the east side of El Pueblo de Los Angeles consists of artifacts and structural remains dating from the Spanish period through the 1950s. The archaeological deposits reach a depth of six feet below the ground surface and remain intact and sealed beneath the La Placita de Dolores Pedestrian Mall. This archaeological site is part of the El Pueblo de Los Angeles State Historic Park and was added to National Register application for the Park.

Sections of the Zanja Madre have been recorded as part of CA-LAN-887/H. Settlers of the El Pueblo de la Reina de Los Angeles began work in 1781 on an irrigation and water conveyance system. The Zanja Madre was a canal built to divert water from the Los Angeles River to the pueblo and its surrounding agricultural fields. It developed into an elaborate system of zanjas that went through multiple modifications and upgrades over the next 120 years.

Potential for Undiscovered Prehistoric Archeological Resources

Previous studies within and adjacent to the project site indicate that there is a potential to find previously undiscovered prehistoric archaeological resources during project construction. One previous project within the project site, the MWD Headquarters construction, resulted in the recovery of prehistoric materials.

Prehistoric materials previously discovered during excavations for the MWD Headquarters at CA-LAN-1575/H indicate a long-term prehistoric occupation of the area, with material dated from 1,000 B.P. to 130 B.P. While no habitation remains were found, the presence of a cemetery at this location in the area of the MWD building indicates that prehistoric habitation likely occurred nearby. The Gabrielino village of Yaanga (Yang-na) was originally located on the western bank of the Los Angeles River, where the Pueblo de Los Angeles was later established. The village was first described by Juan Crespi of the 1769

Portolá expedition as a good village among the trees on the river. The prehistoric village likely lay scattered across a large area from the base of Fort Moore Hill to the Los Angeles River. The community of Yaanga was forcibly relocated at least twice after the founding of the Pueblo de Los Angeles on the site. In 1836, it was reportedly moved to the corner of Commercial and Alameda streets and given the name Rancheria de los Poblanos.

One isolated prehistoric human remain, P-19-004662, was recorded northeast of the site. Various prehistoric finds have been recorded west of the site in the vicinity of El Pueblo de Los Angeles at CA-LAN-7/H.

There is the potential for prehistoric cultural materials to be found anywhere within the project site. Resources are most likely to be encountered within the vicinity of the previously recorded prehistoric cemetery at CA-LAN-1575/H which was located at a depth approximately 8 feet below the present ground surface.

Potential for Undiscovered Historic Archeological Resources

Several historic archaeological resources have been previously recorded within the project site in addition to Old Chinatown at CA-LAN-1575/H. These include the El Pueblo de Los Angeles Winery (CA-LAN-003549/H) and historic artifacts on the west side of Alameda Street (CA-LAN-004320).

The project area was heavily developed throughout the historic period beginning with the establishment of El Pueblo de Los Angeles in 1781. El Pueblo de Los Angeles (El Pueblo de Nuestra la Reina de Los Angeles) was established by Governor Felipe de Neve in 1781 along the banks of the Los Angeles River. By 1820, the settlement was the largest non-mission community in Spanish California with a population of 650.

The 1888 and 1906 Sanborn and 1909 birds-eye view map of Los Angeles shows significant development within the project area.[25] Old Chinatown is labeled on the map in the area of the current Los Angeles Union Station building. The Newell Mathews Co. Building was located directly south of Chinatown. The Kerckhoff-Cuzner Lumber Co. was located north of Chinatown along Macy Street (East Cesar E. Chavez Avenue). The northeastern portion of the project site is adjacent to the location of the Los Angeles Pressed Brick Terra Cotta Co. and the Amalgamated Oil Co. Several residential buildings were located north of Macy Street (East Cesar E. Chavez Avenue).

There is the potential for historic cultural materials to be found anywhere within the project site. Excavations for the MWD Headquarters construction project, the Headstart Building, and the Mozaic Apartments revealed that the fill overlying the historic deposits ranges from one to six feet in the area around the Los Angeles Union Station building and forecourt area to the west of Union Station and up to 14 feet in the area of the tracks east of Union Station.

[25] Birdseye View Publishing Co. (1909) Los Angeles, 1909. [Los Angeles, Cal.: Birdseye View Pub. Co] [Map] Retrieved from the Library of Congress, https://www.loc.gov/item/2005632465

Human Remains

Reviews of historic maps[26,27] did not reveal known Native American or historic period cemeteries, nor known informal Native American burials, within the project site. A Native American cemetery was found during monitoring in 1996 for the MWD Headquarters. The cemetery was recorded as part of multicomponent site P-19-001575 (CA-LAN-1575/H). Twenty-three burial features were excavated at the site in 1996. The northwestern portion of the cemetery was likely affected by the construction of the Los Angeles Union Station building in the 1930s. Part of the project site overlaps with site P-19-001575, but the Native American cemetery within site P-19-001575 is not within the project site.

Tribal Cultural Resources

The NAHC was requested to conduct an updated search from their Sacred Lands File (SLF) for the presence of Native American sacred sites or human remains within the project site and a one-quarter mile buffer on April 21, 2016.[28] An NAHC SLF record search was conducted on April 22, 2016.

The NAHC response to the request stated, "A record search of the NAHC [SLF] was completed for the area of potential effect (APE) for the above referenced project. Records of sites were found in the Los Angeles USGS Quadrangle."[29]

The NAHC identified six contacts of culturally affiliated tribes to consult regarding potential sites within the project area. Letters were sent to the contacts on May 12, 2016. An additional contact who was not on the NAHC list, John Tommy Rosas of the Tongva Ancestral Territorial Tribal Nation, requested consultation pursuant to AB 52 during the scoping period. Mr. Rosas requested the ability to be present during geotechnical borings that are undertaken in support of the project. He requested a discussion with Native American representatives on the characterization of the potential to encounter tribal cultural resources in conjunction with each of the stages of development anticipated in conjunction with the proposed project. He also requested a discussion of performance-based mitigation measures to be considered in the EIR. Joseph Ontiveros of the Soboba Band of Luiseno Indians replied by email on June 14, 2016, stating that the Soboba Band does not have any specific concerns regarding known cultural resources in the specified areas that the project encompasses, but they do request that the appropriate consultation continue to take place between concerned tribes, project proponents, and local agencies. The Soboba Band of Luiseno Indians also requests that approved Native American monitors be present during any future ground-disturbing proceedings, including surveys and archaeological testing, associated with the project.

[26] U.S. Geological Survey. 1928. 7.5-Minute Series, Los Angeles, California, Topographic Quadrangle. Reston, VA.

[27] U.S. Geological Survey. 1900. 15-Minute Series Pasadena, California, Topographic Quadrangle. Reston, VA.

[28] Dustin Keeler, Sapphos Environmental, Inc., Pasadena, CA. 21 April 2016. Letter to Native American Heritage Commission, Sacramento, CA.

[29] Totton, Gayle, Native American Heritage Commission, Sacramento, CA. 25 April 2016. Letter response to Elizabeth Carvajal, Metro.

Letters were sent to the Native American contacts on January 12, 2017. Robert Dorame responded to the letter by phone on January 20, 2017. He requested consultation pursuant to AB 52 and requested that Native American monitors be present during construction. Andrew Salas responded by letter on February 10, 2017. He expressed concerns for cultural resources within the project area, stating that the project lies in an area where the ancestral territories of the Kizh (Kitc) Gabrieleño's prominent villages such as Hutukngna adjoined and overlapped with each other, at least during the Late Prehistoric and Protohistoric Periods. Due to the project location and the high sensitivity of the area location, he requested that one of their certified Native American monitors to be on-site during any and all ground disturbances (including but not limited to pavement removal, post holing, auguring, boring, grading, excavation and trenching) to protect any cultural resources that may be affected during construction or development.

3.6.3 Environmental Impacts/Environmental Consequences

Potential impacts were determined by comparing the effects of the project to eligible archaeological and historical resources against CEQA criteria. These criteria are defined in the following subsections. The State CEQA Guidelines recommend the consideration of four questions when addressing the potential for significant impacts to historical and cultural resources. Would the proposed project:

(a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5(b) of the CEQA Guidelines?

Los Angeles Union Station

As designed, the elements of the proposed project comply with the Secretary of the Interior's Standards, and would not result in a substantial adverse change to this component of the historical resource pursuant to Section 15064.5(b) of the State CEQA Guidelines. The intent of including the parking lots fronting Alameda Street in the HCM nomination was to preserve the viewshed of the western façade of Los Angeles Union Station. Removal of the parking lot and replacement with the Forecourt/civic space with piezoelectric paving and small transit-serving building and Esplanade would minimally interrupt that viewshed. However, these improvements are in keeping with the spirit and intent of the HCM nomination and could be reversed at a future date in order to restore the viewshed associated with Los Angeles Union Station period of significance (1936-1939) which is in compliance with the Standards. Additionally, in compliance with *Secretary of the Interior's Guidelines*, the small transit-serving building and associated shade element would be located at the northern end of the Forecourt and would be designed with complimentary materials to the passenger terminal, and would not detract from the primary entrance of Los Angeles Union Station, which is the primary focal point of the western façade of this building. The landscape design of the character-defining palm trees would be retained. The northern driveway of Los Angeles Union Station would be reconfigured to allow for an enhanced crosswalk connecting to El Pueblo de Los Angeles, and other circulation improvements, such as passenger drop-off zones, would be constructed. These circulation modifications are reversible, and the existing circulation could be restored at a future date. Therefore, the Los Angeles Union Station property would be used for

its historic purpose, and these changes would minimally change the character-defining features of the building, and its site and environment, which is in keeping with the Secretary of the Interior's Standards.

Construction of the proposed project elements would require excavation up to 15 feet below ground surface to install project features in areas comprising the existing short-term parking areas; up to 4 feet below ground surface for the Alameda Street, the associated sidewalks improvements; and up to 15 feet below ground surface for tree wells in the sidewalks. The proposed project may have the potential to result in significant impacts to historical resources as defined in Section 15064.5(b) of the State CEQA Guidelines.

El Pueblo de Los Angeles

The proposed project would have the potential to result in a significant impact to historical resources as defined in Section 15064.5(b) of the State CEQA Guidelines. As designed, the elements of the proposed project comply with the Secretary of the Interior's Standards, and would not result in a substantial adverse change to this component of the historical resource pursuant to Section 15064.5(b) of the State CEQA Guidelines. The project would widen the sidewalks on Alameda Street, which would eliminate one vehicle lane; eliminate the northern driveway at Los Angeles Union Station; result in partial closure of Los Angeles Street; construct an enlarged and improved sidewalk; and create tourist bus parking on Arcadia Street. All improvements to Alameda, Los Angeles, and Arcadia streets would occur within the City-owned right-of-way. No property would be acquired in order to construct these improvements; nor would a change of use occur as a result of construction of this project. These streets would continue to convey pedestrian and limited vehicular traffic, and modification of the roadways would not result in a change to setting to El Pueblo de Los Angeles. The partial closure of Los Angeles Street would improve pedestrian connectivity to Los Angeles Union Station, which would be a benefit and would include paver materials that would be consistent with the El Pueblo Plaza. Therefore, these improvements would increase the park-like setting of El Pueblo de Los Angeles and are intended to promote greater use of the State Historic Park. The property would continue to be used for its historic purpose, no buildings would be altered, and the modifications to the roadways would require minimal change to the character-defining features of the State Historic Park and its site and environment, which is in compliance with the Secretary of the Interior's Standards.

Excavations in the areas surrounding the proposed project area have encountered significant historic archaeological resources. Construction of the proposed project elements would require excavation up to 15 feet below ground surface to install project features in areas comprising the existing short-term parking area; up to 4 feet below ground surface for the Alameda Street, and the associated Esplanade improvements; and up to 15 feet below ground surface for tree wells in the sidewalks. This excavation has the potential to encounter previously unrecorded historical resources. Therefore, the consideration of mitigation measures is required.

(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines?

The proposed project would have the potential to result in significant impact on archaeological resources as defined in Section 15064.5(b) of the State CEQA Guidelines. Construction of the proposed project elements would require excavation up to 15 feet below ground surface to install project features in areas comprising the existing short-term parking areas; up to 4 feet below ground surface for the Alameda Street, and associated sidewalks improvements; and up to 15 feet below ground level for tree wells in the sidewalks. This excavation has the potential to encounter previously recorded and unrecorded significant archaeological resources. Therefore, the consideration of mitigation measures is required.

CA-LAN-1575/H

CA-LAN-1575/H is eligible for the National Register, under Section 106, Criterion D, as an archaeological site that has yielded, or may be likely to yield, information important in prehistory or history. This property is eligible for the California Register for the same reasons. This multicomponent site consists of the ca. 1860–1930s Chinatown and a Native American cemetery. Much of the site is under extant structures associated with Los Angeles Union Station. Monitoring of construction for the Metro Red Line Subway revealed substantial deposits of Chinese artifacts, architectural remains, and other cultural features. CA-LAN-1575H was originally recorded by John Foster of Greenwood and Associates in 1989 during archaeological monitoring efforts associated with the Metro Red Line Subway Project. Mechanical excavations by Applied EarthWorks, Inc. for the MWD Headquarters discovered historical features including hundreds of privies, wells, and structural foundations.[30]

A prehistoric Native American cemetery was discovered during monitoring in the northwestern corner of the 4.3-acre parcel that was excavated for an underground parking facility.[31] The site is immediately southeast of Los Angeles Union Station across Alameda Street from El Pueblo de Los Angeles. The fill overlaying the site from the 1930s construction of the Los Angeles Union Station complex ranges from 1 to 3 feet under the asphalt parking lot, garage structure, and courtyard areas; and up to 24 feet under the raised track area along the east side of the parcel.

The proposed improvements within the boundaries of CA-LAN-1575/H, including the replacement of the parking lot, the reconfiguration of Alameda Street lanes, and the removal of a driveway at Los Angeles Union Station, could have a potentially significant impact if the ground disturbance extends below the fill overlaying the site. The proposed perimeter improvements may result in exposure of cultural resources deeper than 3 feet below the ground surface. The ground disturbance for the Forecourt

[30] Metropolitan. 1998. Historical Archaeology at the Headquarters Facility Project Site, The Metropolitan Water District of Southern California, Volume 1, Data Report: Recovered data, Stratigraphy, Artifacts, and Documents.

[31] Goldberg et al. 1999. The People of Yaanga?: Archaeological Investigations at CA-LAN-1575/H, The Metropolitan Water District of Southern California Headquarters Facility Project.

improvements is expected to extend 15 feet below the present ground surface. Therefore, the consideration of mitigation measures is required.

P-19-000887

This historic site on the east side of El Pueblo de Los Angeles consists of artifacts and structural remains dating from the Spanish period through the 1950s, including sections of the Zanja Madre have been recorded as part of CA-LAN-887/H. The archaeological deposits remain intact and sealed beneath the La Placita de Dolores Pedestrian Mall. The proposed improvements within the boundaries of the site, including the reconfiguration of Alameda Street lanes, could have a potentially significant impact if the ground disturbance extends below the fill overlaying the site. Therefore, the consideration of mitigation measures is required.

Potential Impact to Undiscovered Archaeological Resources

There is the potential for prehistoric cultural materials to be found anywhere within the project site. They are most likely to be encountered within the vicinity of the previously recorded prehistoric cemetery at CA-LAN-1575/H. There is also the potential for historic cultural materials to be found anywhere within the project site. They are most likely to be encountered within the vicinity of the previously recorded Old Chinatown at CA-LAN-1575/H and adjacent to Alameda Street. Unrecorded zanjas in the vicinity of La Plaza may potentially be impacted by the project. Since these unknown sites may possess integrity and may yield important significant scientific information, they could be eligible for the National Register and the California Register. If destruction of these unknown sites occurs due to project construction, the project would result in a substantial adverse effect to a historical resource pursuant to Section 15064.5(b) of the CEQA Guidelines. Therefore, the consideration of mitigation measures is required.

Excavations in the areas surrounding the proposed project area have encountered significant historic archaeological resources. Construction of the proposed project elements would require excavation up to 15 feet below ground surface to install project features in areas comprising the existing short-term parking area; up to 4 feet below ground surface for the Alameda Street, and the associated Esplanade improvements; and up to 15 feet below ground surface for tree wells in the sidewalks. This excavation has the potential to encounter previously unrecorded historical resources. Therefore, the consideration of mitigation measures is required.

(c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

Excavations in the areas surrounding the proposed project area have encountered significant paleontological resources. Construction of the proposed project elements would include excavation up to 15 feet below ground surface to install project features in areas comprising the existing short-term parking areas, Alameda Street, and the associated sidewalks and landscape area. This excavation has the potential to encounter unrecorded significant paleontological resources.

Under CEQA, impacts to paleontological resources would be considered significant if there is a high likelihood of encountering unique paleontological resources that could be damaged or destroyed as a result of excavation. Surface grading or very shallow excavations in the younger Quaternary alluvium of the proposed project area are unlikely to encounter significant fossil vertebrate remains. Deeper excavations that extend down into older Quaternary deposits, however, could uncover significant vertebrate fossils. The proposed project would not have the potential to result in significant impacts to geological features. The proposed project would have the potential to result in significant impacts to paleontological resources as defined in Section 15064.5(b) of the CEQA Guidelines.

(d) Disturb any human remains, including those interred outside of formal cemeteries?

Excavations in the areas surrounding the proposed project area have encountered human remains. Construction of the proposed project elements would include excavation up to 15 feet below ground surface to install project features in areas comprising the existing short-term parking areas, Alameda Street, and the associated sidewalks and landscape area. This excavation has the potential to encounter unrecorded human remains.

Exposure of human remains is of particular concern within CA-LAN-1575/H, an extensive site surrounding Los Angeles Union Station known to contain human remains. The replacement of the parking lot west of Los Angeles Union Station is proposed within this site, in an area approximately 225 feet (70 meters) northwest of where human remains were recovered in 1996 at a depth of between 3 and 8 feet below ground surface. Portions of the Native American cemetery were removed after data-recovery excavations, but additional deposits likely exist in other portions of the site. The proposed project would have the potential to result in significant impacts to human remains as defined in Section 15064.5(b) of the CEQA Guidelines.

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe?

Excavations in the areas surrounding the proposed project area have encountered significant tribal resources. Construction of the proposed project elements would include excavation up to 15 feet below ground surface to install project features in areas comprising the existing short-term parking areas, Alameda Street, and the associated sidewalks and landscape area. This excavation has the potential to encounter significant tribal resources.

Records of tribal cultural resources were found in the USGS Los Angeles topographical quadrangle. The Gabrielino village of Yaanga (Yang-na) was originally located on the western bank of the Los Angeles River where Pueblo de Los Angeles was later established. A Native American cemetery was found within the proposed project site during monitoring in 1996 for the MWD Headquarters. The cemetery was recorded as part of multicomponent site P-19-001575 (CA-LAN-1575/H). Twenty-three burial features were excavated at the site in 1996. The northwestern portion of the cemetery was likely affected by the

construction of the Los Angeles Union Station building in the 1930s. The Native American cemetery on this site is considered sacred to the Gabrieleno Tongva. Portions of the cemetery were removed during data-recovery operations in 1996, approximately 240 feet (75 meters) east of the forecourt improvement impact area, but additional deposits likely exist in other portions of CA-LAN-1575/H. The physical removal and destruction of burials, artifacts, and features at CA-LAN-1575/H would result in a substantial adverse change under CEQA. The proposed project would have the potential to result in significant impacts to tribal resources as defined in Section 15064.5(b) of the State CEQA Guidelines.

3.6.4 Cumulative Impacts

(a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5(b) of the CEQA Guidelines?

The project elements have been designed to comply with the Secretary of the Interior's Standards, thereby avoiding impacts to historical resources. Recognizing that change is expected on principal arterial and secondary roadways in an urban setting, the overall historic character, driving experience, and integrity of the roadways will remain. However, the excavation required to construct the proposed project has the potential to result in significant impacts to previously unrecorded historical resources and contribute to cumulative impacts on historical resources related to the previous settlements in what is now the Chinatown neighborhood of the City of Los Angeles. Therefore, the consideration of mitigation measures is required.

(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the CEQA Guidelines?

CA-LAN-1575/H is a large resource that covers the entire forecourt area and the east side of Alameda Street and may be found 3 feet below ground surface. It has been affected by at least four previous construction projects and is likely to be affected by numerous future projects. The sites as a whole have not been documented by archaeologists in the modern era because the majority of the area is covered by pavement. Consequently, the site is particularly vulnerable to cumulative impacts. Therefore, the consideration of mitigation measures is required.

(c) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

The proposed project would have the potential to result in significant cumulative impacts to paleontological resources as defined in Section 15064.5(b) of the State CEQA Guidelines. Surface grading or very shallow excavations in the younger Quaternary alluvium of the proposed project area are unlikely to encounter significant fossil vertebrate remains. Deeper excavations that extend down into older Quaternary deposits, however, may uncover significant vertebrate fossils. Therefore, the consideration of mitigation measures is required.

(d) Disturb any human remains, including those interred outside of formal cemeteries?

The proposed project would have the potential to result in significant cumulative impacts on human remains as defined in Section 15064.5(b) of the State CEQA Guidelines. Excavations in the areas surrounding the proposed project area have encountered human remains. Human remains have been affected by at least two previous construction projects and are likely to be affected by numerous future projects. Therefore, the consideration of mitigation measures is required.

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe?

The proposed project would have the potential to result in significant cumulative impacts on tribal resources as defined in Section 15064.5(b) of the State CEQA Guidelines. Excavations in the areas surrounding the proposed project area have encountered significant tribal resources. Tribal resources have been affected by at least one previous construction project and are likely to be affected by numerous future projects. Therefore, the consideration of mitigation measures is required.

3.6.5 Mitigation Measures

The following mitigation measures would reduce potential impacts to cultural resources:

> **MM-CULTURAL-1:** *Archaeological and Historical Resources – Avoidance and Monitoring*. Completion of a Worker Education and Awareness Program (WEAP) for all personnel who will be engaged in ground-disturbing activities shall be required prior to the start of ground-disturbing activities. This shall include training that provides an overview of cultural resources that might potentially be found and the appropriate procedures to follow if cultural resources are identified. This requirement extends to any new staff prior to engaging in ground disturbing activities.
>
> An environmental sensitive area shall be established through the use of construction fencing to minimize the potential for built environment resources to be damaged during construction activities.
>
> Metro shall require monitoring by a qualified archaeologist of all ground-disturbing activities within 100 feet of known extant unique archaeological resources, significant historical resources, or tribal cultural resources. In addition, consultation shall be undertaken with the Native American tribal representatives designated by the NAHC to determine whether a Native American monitor shall also be present during all or a portion of the ground-disturbing activities.
>
> In the event that previously unknown unique archaeological resources, significant historical resources, or tribal cultural resources are encountered during construction, the resources shall

either be left *in situ* and avoided; or the resources shall be salvaged, recorded, and reposited consistent with the provisions of a Phase III data recovery program consistent with the provisions of a Cultural Resources Management Plan. Data recovery is not required by law or regulation. It is, however, the most commonly agreed-upon measure to mitigate adverse effects to archaeological sites eligible or listed under Section 106 Criterion D, as it preserves important information that would otherwise be lost.

If a segment of the Zanja Madre (CA-LAN-887/H) is encountered during construction and impacts are unavoidable the following treatment measures will be implemented. If a zanja component is present, then controlled pavement removal and controlled excavation with a flat blade can be conducted to follow the path of the zanja feature and the identified segment of the zanja will be hand excavated so that its integrity, condition, and associations can be assessed. If a segment of the zanja has poor integrity, then it will be recorded to a level sufficient to document its condition. If a segment of the zanja has good integrity, then it will be subject to full recordation, including photo-documentation and measured drawings.

MM-CULTURAL-2: *CRMP and Pre-Construction Testing*. Prior to construction, a Cultural Resource Management Plan (CRMP) will be prepared that will target areas within the archaeological APE most likely to contain buried cultural resources. Subsurface test excavation will be conducted to ensure that the Project will identify and evaluate significant archaeological resources. A research design and work plan will be focused on the physical identification of intact subsurface archaeological remains. Prior to construction, Phase II archaeological testing will be conducted in areas most likely to contain buried cultural resources in soils that have been predominantly *in situ* during the past 50 years within the boundaries of recorded unique archaeological resources, significant historical resources as defined in Section 15064.5(a) of the State CEQA Guidelines, or tribal cultural resources as defined in AB 52. If resources are discovered during Phase II testing prior to construction, they will be evaluated for significance with criteria set forth in the CRMP. If significant archaeological deposits are found during test excavations prior to construction, a mitigation plan will be developed to ensure that important archaeological data are not lost. The mitigation plan will include methods by which prehistoric, protohistoric, and historical archaeological deposits will be avoided or recovered prior to construction. If the testing determines no unique archaeological resources or significant historical resources, including potential tribal cultural resources, then the work shall proceed consistent with the provisions of MM-CULTURAL-1.

Where the project site has been subject to testing within two years of the proposed activity and no unique archaeological resources, significant cultural resources, or tribal cultural resources are known from the project site, work shall proceed per the provision of Mitigation Measure CULTURAL-1.

a. If the testing determines potential unique archaeological resources or significant historical resources, including potential tribal cultural resources, at a depth that will be affected by the ground-disturbing activities, one of two courses of action shall be employed:

    1. Where avoidance is feasible, the ground disturbance shall be modified to avoid the potentially significant resource, and the work shall then proceed consistent with the provisions of MM-CULTURAL-1. An archaeological monitor shall be present during ground-disturbing activities. In addition, consultation shall be undertaken with the local Native American Tribal contacts designated by the NAHC to determine if a Native American monitor shall also be present during all or a portion of the ground-disturbing activities.
    2. Where avoidance is not feasible, a Phase II evaluation of the cultural resources shall be undertaken to determine the significance of the cultural resource. If the Phase II investigation identifies a unique/eligible cultural resource within the area proposed for ground-disturbing work, Metro shall determine whether to avoid the resource through redesign or proceed with a Phase III data recovery program consistent with the provisions of a Cultural Resource Management Plan. The work shall then proceed consistent with the provisions of MM-CULTURAL-1.

MM-CULTURAL-3: *Paleontological Resources – Paleontological Monitoring*. Impacts to cultural resources related directly or indirectly to the destruction of a unique paleontological resource from the proposed project shall be reduced to below the level of significance by monitoring, salvage, and curation of unanticipated paleontological resources discovered during ground-disturbing activities in previously undisturbed native soils located 6 or more feet below the ground surface that would have the potential to contact geologic units with a high to moderate potential to yield unique paleontological resources. Ground-disturbing activities include, but are not limited to, drilling, excavation, trenching, and grading. If paleontological resources are encountered during ground-disturbing activities, work stops, an assessment of the site is conducted. No work shall proceed within immediate vicinity until (cite conditions). At the time that work is continued to be authorized, Metro shall require and be responsible for salvage and recovery of those resources consistent with standards for such recovery established by the Society of Vertebrate Paleontology.

Paleontological Resource Sensitivity Training shall be required for all project personnel prior to the start of ground-disturbing activities in geologic units with a moderate to high potential to yield unique paleontological resources. This shall include a brief field training that provides an overview of fossils that might potentially be found, and the appropriate procedures to follow if fossils are identified. This requirement shall extend to any new staff joining the project.

Construction monitoring by a qualified paleontological monitor shall be implemented during all ground-disturbing activities that affect previously undisturbed geologic units 6 feet or more below the ground surface and have the potential to encounter geologic units with a moderate to

high potential to yield unique paleontological resources. In the event that a paleontological resource is encountered during construction, all ground-disturbing activity within 100 feet of the find shall be halted until a qualified paleontologist can evaluate the significant of the discovery. Additional monitoring recommendations may be required. If the resource is found to be significant, the paleontologist shall determine the most appropriate treatment and method for removing and stabilizing the specimen. Curation of the any significant paleontological finds shall be required with a qualified repository, such as the Natural History Museum of Los Angeles County.

Within 90 days of the completion of any salvage operation or monitoring activities, a mitigation report shall be submitted to Metro with an appended, itemized inventory of specimens. The report and inventory, when submitted to Metro, shall signify the completion of the program to mitigate impacts to paleontological resources.

MM-CULTURAL-4: *Regulatory Requirements – Human Remains*. In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are encountered during excavation activities, the County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby areas reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains.

If the County Coroner determines that the remains are or are believed to be Native American, s/he shall notify the NAHC in Sacramento within 24 hours. In accordance with Section 5097.98 of the California PRC, the NAHC shall immediately notify the person(s) it believes to be the Most Likely Descendant of the deceased Native American. The descendants shall complete their inspection and make a recommendation within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with Metro, the disposition of the human remains. The Most Likely Descendant's recommendation shall be followed if feasible, and may include scientific removal and non-destructive analysis of the human remains and any items associated with Native American burials. If Metro rejects the Most Likely Descendant's recommendations, the agency shall rebury the remains with appropriate dignity on the property in a location that will not be subject to further subsurface disturbance (14 California Code of Regulations §15064.5(e)).

3.6.6 Level of Significance after Mitigation

Implementation of MM-CULTURAL-1 and MM-CULTURAL-2 would reduce impacts to historical resources to below the level of significance.

Implementation of MM-CULTURAL-1 and MM-CULTURAL-2 would reduce impacts to archaeological resources to below the level of significance.

Implementation of MM-CULTURAL-3 would reduce impacts to paleontological resources to below the level of significance.

Implementation of MM-CULTURAL-4 would reduce impacts to human remains to below the level of significance.

Implementation of MM-CULTURAL-1 and MM-CULTURAL-2 would reduce impacts to tribal cultural resources to below the level of significance.

3.7 Energy

This section of the Environmental Impact Report (EIR) analyzes potential impacts to energy from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The analysis of energy consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation. Energy conservation and management are features of this section developed in accordance with applicable federal, state, and local law including the Federal Transit Administration's (FTA's) supercircular, the California Energy Commission and Senate Bill 1389, the County of Los Angeles General Plan, City of Los Angeles General Plan, and the Sustainability City pLAn.

3.7.1 Regulatory Setting

Federal

Federal Transit Administration Supercircular Uniform Administrative requirements, Cost Principles, and Audit Requirements for Federal Awards

Formed in 1964 as an agency within the U.S. Department of Transportation, the FTA was developed to provide financial and technical assistance to local public transit systems. The FTA administers and oversees grants provided to states and local public agencies to support public transportation. The FTA often issues circulars to ensure that grantees follow federal statutory and administrative requirements for federal awards. The Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards was published in 2014 and serves as the standard for pre and post award requirements. Subpart D includes post federal award requirements. Section 200.301 states that Performance reporting frequency and content should be established to understand the recipient progress as well as facilitate identification of promising practices among recipients and build evidence upon which the Federal awarding agency's program and performance decisions are made. Section 200.324 states that the non-Federal entity must make available, upon request of the Federal awarding agency or pass-through entity, technical specifications on proposed procurements where the Federal awarding agency or pass-through entity believes such review is needed to ensure that the item or service specified is the one being proposed for acquisition.[1] As a federally funded project, the forecourt modification is subject to all applicable FTA guidelines.

[1] Code of Federal Regulations , Title 2, Subtitle A, Part 200, Subpart D, Section 200.

Energy Independence and Security Act of 2007[2]

Signed into law on December 19, 2007, by President Bush, the Energy Independence and Security Act of 2007 aims to increase production of renewable fuels, increase efficiency of products, buildings, and vehicles, reduce greenhouse gas emissions, and increase energy security. Significant provisions enacted were the corporate average fuel economy standards and the renewable fuel standard.

CAFÉ Standards[3]

The Corporate Average Fuel Economy Standards are a set of regulations enacted by Congress in 1975 as a result of the Arab Oil Embargo in an attempt to improve average fuel economy of cars and trucks produced in the United States. The standards are issued by the U.S. Department of Transportation and the U.S. Environmental Protection Agency (EPA). The National Highway Traffic Safety Administration (NHTSA) is responsible for rulemaking actions, fleet characteristics data, compliance activities, and manufacturers' fuel economy performance records. The current CAFÉ standards would require a fleet average of at least 54.5 miles per gallon (mpg) by 2025. This number is subject to change, as the EPA has reopened a midterm review as per executive mandate by President Trump.[4]

State

California Department of Transportation (Caltrans) Local Assistance Procedures Manual

The California Department of Transportation (Caltrans) revised Chapter 6, Environmental Procedures, of their Local Assistance Procedures Manual in 2013. This chapter outlines the necessary measures that must be taken to comply with the National Environmental Policy Act (NEPA) and all other applicable federal environmentally related laws. A Memorandum of understanding (effective October 1, 2012) between the Federal Highway Administration and the California Department of Transportation allows for Caltrans to assume the responsibility for the environmental review, interagency coordination, and regulatory compliance components of a proposed project.

Regional

2016 SCAG RTP/SCS

The Southern California Association of Governments (SCAG) adopted a new regional transportation plan to include elements addressing mobility, accessibility, sustainability, and a quality of life in April 2016. The vision set forth in the regional transportation plan includes more compact communities, increasing availability and access to public transportation, as well as an increase in healthy transportation methods

[2] Public Law 110-140, Energy Independence and Security Act of 2007.

[3] National Highway Traffic Safety Administration. Accessed 15 June 2017. Laws and Regulations – Corporate Average Fuel Economy. Available at: https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy

[4] White House, Office of the Press Secretary. Accessed 15 June 2017. Buy American and Hire American for the United States Automobile Industry.

such as walking and bicycling. The SCAG strategy includes compact communities in existing urban areas where neighborhoods have efficient and plentiful public transportation as well as abundant opportunities to walk, bike, and pursue forms of active transportation.[5] The proposed scenario includes several major initiatives including; preserving the transportation system we already have, expanding the regional transit system, expanding passenger rail, improving highway and arterial capacity, managing demand on the transportation system, optimizing the performance of the transportation system, promoting walking, biking, and other forms of active transportation, leveraging technology, improving airport access, new growth around transit, improving air quality and reducing greenhouse gases, and preserving natural lands.[6]

Metro Active Transportation Strategic Plan

The Active Transportation Strategic Plan was adopted by the Metro Board of Directors on May 26, 2016. The objectives of the Active Transportation Strategic Plan are to: identify improvements that increase access to transit for people who walk and bike; create a regional active transportation network; develop supporting programs and policies related to education, encouragement, enforcement, and evaluation; guide future investments; and develop a funding strategy. The decision to walk or ride a bicycle (instead of driving) hinges on the presence of safe and convenient active transportation infrastructure, such as protected bicycle lanes and sidewalks. When this infrastructure is provided, people use it: in 2006, federal funding for active transportation increased more than 60 percent to almost $1 billion per year (up from $360 million previously). Eight years later, the number of people riding bicycles to work in the United States had increased by 60 percent. A similar trend occurred in Los Angeles County, where bicycle commute trips grew 81 percent over the same time period.[7]

Metro First Last Mile Strategic Plan

Metro and the Southern California Association of Governments (SCAG) jointly released the First Last Mile Strategic Plan in March 2014. The goal of the plan is to better coordinate infrastructure investments in station areas to extend the reach of transit, with the ultimate goal of increasing ridership.[8] The provision of a safe transportation system is a cornerstone of Metro's Vision, and given the fact that most transit users are pedestrians during the first, last, and transfer components of their trips, pedestrian safety is a major concern. Pedestrians are at risk within environments surrounding transit stations, primarily from automobile traffic. Los Angeles County has an alarming incidence of fatality rates, especially among some of the more transit dependent populations (the very young and

[5] Southern California Association of Governments. Accessed 12 June 2017. *2016-2040 RTP/SCS. Executive Summary. Overarching Strategy.* Available at: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx

[6] Southern California Association of Governments. Accessed 20 January 2017. *2016-2040 RTP/SCS. Executive Summary.* Available at: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx

[7] Los Angeles County Metropolitan Transportation Agency. April 2016. Active Transportation Strategic Plan.

[8] Los Angeles County Metropolitan Transportation Agency. Accessed 24 July 2017. *First Last Mile Strategic Plan*, p. 3. Available at: https://media.metro.net/docs/First_Last_Mile_Strategic_Plan.pdf

very old). Risks can be significantly mitigated through design and vehicular speed control measures, and should be done so along prioritized access routes within station catchment areas.[9]

Metro Urban Greening Toolkit

Metro's Urban Greening Toolkit is rooted in Metro's ongoing dedication to sustainability and placemaking principles and practices. It is an interactive website which helps to meet requirements of SCAG's RTP/SCS by supporting the creation of Safe, Healthy, and Livable communities within the Los Angeles region through the enhancement of the public realm. The provision of high-quality and well-programmed streets, pathways, open spaces, and green spaces directly supports ridership by encouraging people to walk, bike, and take other forms of "alternative" transportation and to choose transit over driving. The effort to increase ridership is a fundamental part of Metro's climate change strategy, as outlines in Metro's Toward a Sustainable Future: June 2008 Baseline Sustainability Report.[10]

Metro Transit Supportive Planning Toolkit

The Metro Transit Supportive Planning Toolkit (the Toolkit) details specific policies and programs that can be used to promote Transit Oriented Communities (TOC). The Toolkit provides local governments, advocates, and developers in Los Angeles County (Metro's service area) with strategies for integrating land use and transportation planning, in order to encourage reduced passenger vehicle trips and vehicle miles traveled (VMT) through increased rates of walking, biking, and transit usage. The Toolkit includes a wide range of policy and regulatory tools that have successfully been implemented throughout Southern California and across the State.[11]

The quality of pedestrian and bicycle circulation conditions can affect travel activity, including transit ridership. Public improvements that prioritize pedestrian and bicyclist travel create visual cues for motorists and by default, create safe and comfortable facilities to neighborhood centers and transit hubs. Additionally, including pedestrian and bicycle amenities to station areas and connecting those facilities to the surrounding area can create a more accessible transit environment, encouraging new riders.[12]

[9] Los Angeles County Metropolitan Transportation Agency. Accessed 24 July 2017. *First Last Mile Strategic Plan*, p. 10. Available at: https://media.metro.net/docs/First_Last_Mile_Strategic_Plan.pdf

[10] https://www.metro.net/interactives/greenplaces/metro-values.html, accessed 24 July 2017.

[11] Los Angeles County Metropolitan Transportation Authority. Accessed 25 July 2017. *Los Angeles County Metropolitan Transportation Authority Transit Supportive Toolkit.* Available at: https://www.metro.net/projects/tod-toolkit/

[12] Los Angeles County Metropolitan Transportation Authority. Accessed 25 July 2017. *Los Angeles County Metropolitan Transportation Authority Transit Supportive Toolkit*. Available at: https://www.metro.net/projects/tod-toolkit/pedestrian-and-bicycle-circulation

Los Angeles County Metropolitan Transportation Authority Green Construction Policy[13]

On August 4, 2011, the Los Angeles County Metropolitan Transportation Authority (Metro) adopted the Green Construction Policy (GCP) and committed to using greener, less polluting construction equipment and vehicles and implementing best management practices (BMPs) to reduce harmful diesel emissions on all Metro construction projects performed on Metro properties and rights of way. The EPA and the South Coast Air Quality Management District (SCAQMD) recommended the use of cleaner on-road and off-road equipment to mitigate particulate matter and nitrogen oxide compound emissions. The adoption of the Green construction policy by the Los Angeles County Metropolitan Transportation Authority was the first of its kind for a transit agency within the American Public Transportation Association thus becoming an industry leader in the APTA community.

Los Angeles County Metropolitan Transportation Authority Climate Action and Adaptation Plan[14]

In June of 2012, Metro released their Climate Action and Adaptation Plan. This plan was authored to serve as a framework to identify areas where Metro could reduce GHG emissions while considering the costs and volume of emissions reduced. Established within is the belief that well-planned and well-used public transportation reduces greenhouse gas emissions, thus reducing the drastic effects of climate change. It is the goal of Metro to develop public transportation systems that create alternatives to driving thus fostering communities that engage in greater levels of active transportation such as walking and bicycling.

Los Angeles County Metropolitan Transportation Authority Water Action Plan[15]

Transportation and usage of water are inevitably very energy intensive. In June of 2010, Metro's Water Action Plan was published. The primary objective of the Water Action Plan was to reduce consumption in a cost-effective and energy-conscious manner. The Water Action Plan looked at the totality of water consumption and recommended improvements that would conserve water and thus reduce energy demands. A series of strategies were developed to address water and energy consumption concerns including use of recycled water, installation of higher efficiency engine components, graywater reclamation for use with standard fixtures, and use of recycled water for landscape irrigation. All these strategies were developed to reduce water consumption and in turn energy consumption.

[13] Los Angeles County Metropolitan Transportation Authority. Accessed 15 June 2017. Executive Management and Audit Committee, Construction Committee Green Construction Policy.

[14] Los Angeles County Metropolitan Transportation Authority. Accessed 16 June 2017. Climate Action and Adaptation Plan- June 2012. Available at: http://media.metro.net/projects_studies/sustainability/images/Climate_Action_Plan.pdf

[15] Los Angeles County Metropolitan Transportation Authority. Accessed 16 June 2017. Water Action Plan. Available at: http://media.metro.net/projects_studies/sustainability/images/Water_Plan2010_0825.pdf

Local

City of Los Angeles General Plan

As an element of the General Plan, the "Plan for a Healthy Los Angeles" outlines the vision of the City of Los Angeles in relation to promoting health and well-being. The vision for a healthy Los Angeles includes "Laying the foundation for healthy communities and healthy living by promoting infrastructure improvements that support active transportation with safe, attractive, and comfortable facilities that meet community needs."

The Mobility Plan 2035 (Mobility Plan), the circulation element of the General Plan, stresses a balanced, affordable, and sustainable transportation system. The Mobility Plan has 6 goals that highlight the mobility priorities of the city. Those goals are as follows: A healthy city that emphasizes safety first; a city with a sustainable and well-maintained world-class infrastructure; access for all Angelenos; collaboration, communication, and informed choices; clean environments for a healthy community; and smart investments that build and maintain a multi-modal transportation and place-making system. As evident in the six goals, health is major theme in the Mobility Plan with policies that emphasize active transportation, safety, sustainability, and the environment.

Sustainable City pLAn

In April of 2015, the first ever Los Angeles Sustainable City pLAn was introduced. The Sustainable City pLAn was introduced to serve as a "roadmap for a Los Angeles that is environmentally healthy, economically prosperous, and equitable in opportunity for all- now and over the next 20 years." The Sustainable City pLAn includes a vision for the future of L.A., a concrete pathway to achieve desired outcomes, framework for policy development, a system of sustainability metrics, and a means to engage residents. Of the 14 topic areas discussed to transform L.A., the most applicable to energy are local solar power, energy-efficient buildings, carbon and climate leadership, and mobility and transit. Established goals for each of the applicable topic areas are as follows:

- **Local Solar Power:** Within the local solar power topic area three main goals were identified including an increased in total cumulative megawatts of local solar photovoltaic power from between 900 and 1500 megawatts in 2025 to 1500-1800 megawatts in 2035, and increase in cumulative total MW energy storage capacity to at least 1654 megawatts by 2025, and lastly the installation of at least 1 megawatt of solar on the LA convention center rooftop.
- **Energy-efficient buildings:** Buildings are one of the largest consumers of electricity and one of the major sources of greenhouse-gas emissions thus retrofitting buildings is pivotal in the effort to reduce the City of LA's carbon footprint. Two primary goals were established including 1) expanding the Better Buildings Challenge (BBC) to over 60 million square feet and avoiding 1,250 gigawatt-hours (GWh) of energy use due to efficiency programs in 2017 and 2) a 30 percent reduction in energy usage per square foot by 2035.

- **Carbon and Climate Leadership:** The devastating effects of climate change present a daunting challenge to all humanity, negatively affecting the health and welfare of Angelenos. As a result, the Sustainable City pLAn incorporated three carbon and climate leadership goals. These goals include a reduction of GHG emissions to below 1990 baseline standards. This includes a 45 percent reduction by 2025, a 60 percent reduction by 2035, and an 80 percent reduction by 2050. The second goal includes improving the GHG efficiency of Los Angeles' economy from 2010 levels by 55 percent. Lastly, the third goal includes divesting completely from coal-fired power plants by 2025.
- **Mobility and Transit:** Mobility and transportation are vital components of every Angelenos' residents' life whether they drive a car, walk, ride a bike, or take public transportation. The economic and environmental impacts of transit and mobility are vast and thus are discussed in the sustainable city pLAn. The vision includes investing in rail, bus lines, and pedestrian/bike safety in an effort to reduce vehicle miles traveled. Two goals were established including building of 65 bike share stations with 1,000 bikes as well as reducing vehicle miles traveled per capita by 5 percent by 2025.

The Alameda District Specific Plan

The Alameda District Specific Plan Appendix F includes an energy conservation category. This category establishes energy consumption thresholds for construction and operation. During construction the peak day maximum for gallons of diesel fuel used is 3,665. The operational maximum increase for kilowatt-hours (kWh) per year of electricity generated is 175.26 million. For natural gas consumption, there is a maximum allowable increase of 380.79 million cubic feet (cf) per year.

3.7.2 Affected Environment/Existing Conditions

Electricity

Electrical Power

Electrical power in the City of Los Angeles is supplied by the Los Angeles Department of Water and Power (LADWP). Currently, the LADWP serves approximately 1.4 million residential and business customers, including Los Angeles Union Station, in the City. Electricity provided by the LADWP is generated from a diverse mix of power sources, including coal, natural gas, nuclear, and large hydropower, in addition to renewable sources such as wind, solar, small hydroelectric, biomass & bio-waste, and geothermal.

LADWP is the third largest electric utility in California, covering a service area of 465 square miles in the City of Los Angeles, in addition to the Owen's Valley in the Eastern Sierra, and exceeding annual sales of 23 million megawatt-hours (MWh). Projected future demand growth is approximately 1.3 percent a year, prior to anticipated reductions in energy use resulting from energy efficiency and distributed

generation initiatives.[16] It is a vertically integrated utility, owning and operating the majority of its generation, transmission, and distribution systems.[17] This includes 20 power plants, 15,452 transmission towers, 6,752 miles of overhead distribution lines, and 31,728 utilitarian streetlights.[18]

The 2016 Power Integrated Resources Plan (IRP) is a 20-year roadmap guiding LADWP's Power System in its efforts to supply reliable electricity in an environmentally responsible and cost-effective manner. The IRP examines ten case scenarios with a combination of strategies to identify a portfolio of generation resources and system assets that meet the city's future energy needs and the lowest cost and risk, consistent with LADWP's environmental priorities and reliability standards.[19] The recommended IRP case scenario identifies four key initiatives: (1) greenhouse gas reduction; (2) transportation electrification; (3) dispatchable resources; and (4) power system reliability.

The IRP provides a path towards the Los Angeles City Council's expressed goal of reaching a 100 percent renewable energy portfolio by including early coal replacement two years ahead of schedule by 2025, accelerating the Renewables Portfolio Standard (RPS) to 50 percent by 2025, implementing 15 percent energy efficiency by 2020, repowering coastal in-basin generating units with new, highly efficient units by 2029 to provide grid reliability and ramping capability, and investing in the Power System Reliability Program to maintain a robust and reliable Power System.[20]

In addition to the efforts of the LADWP to help meet the goals of the City of Los Angeles related to efficiency and climate, the city's Bureau of Street Lighting is administering the LED Streetlight Replacement Program. The program has replaced over 140,000 existing streetlight fixtures in the city with LED units over a four-year period. The expected savings of the new lights has exceeded the initial program goals. Energy use has been reduced by 63.1 percent and carbon emissions have been reduced by 47,583 metric tons a year.[21]

Electricity Related to Water Consumption

Significant energy is required to pump and transport water into the Los Angeles basin. Source water extraction, treatment and local distribution also require significant amounts of energy. The LADWP is the water supply service provider to residents and businesses within the City of Los Angeles. The Los Angeles Aqueducts, local groundwater, and supplemental water purchased from the Metropolitan Water District of Southern California (MWD) are the primary sources of water for the city. LADWP has initiated a study to determine the nexus between water and energy consumption, and to evaluate the associated carbon footprint of its water supply sources. The water purchased from MWD is the most

[16] Los Angeles Department of Water and Power. 2016. 2016 Power Integrated Resource Plan.

[17] Los Angeles Department of Water and Power. 2016. 2016 Power Integrated Resource Plan.

[18] Los Angeles Department of Water and Power. 2016. 2016 Power Integrated Resource Plan, p. ES-1.

[19] Los Angeles Department of Water and Power. 2016. 2016 Power Integrated Resource Plan, p. ES-2.

[20] Los Angeles Department of Water and Power. 2016. 2016 Power Integrated Resource Plan, p. ES-3.

[21] http://bsl.lacity.org/led.html, accessed 14 June 2017.

energy intensive source of water for LADWP. This is followed by the production of recycled water and the treatment of groundwater.[22]

Because water supplies are declining due to environmental degradation and impacts from climate change, the LADWP is implementing recycled water projects to fill a larger portion of the city's water supply portfolio. In addition, stormwater capture projects for groundwater recharge are also being developed.[23]

The California Urban Water Management Planning Act (effective January 1, 1984) requires that every urban water supplier prepare and adopt an Urban Water Management Plan (UWMP) every five years. The LADWP's 2015 UWMP is the most recent plan available. It is the city's master plan for water supply and resources management and is consistent with the City's goals and policy objectives.[24]

Total water demand varies from year-to-year and is influenced by population growth, weather, water conservation efforts, drought, and economic activity. From FY 2012/13 through FY 2014/15, drought conditions triggered State and City mandatory conservation measures. This helped to reduce water use by 13 percent from FY 2013/14 to FY 2014/15.[25]

Since 1991, the City of Los Angeles has recognized that water conservation is a foundation to improve water supply reliability.[26] Water use must be characterized as either indoor or outdoor use in order to determine the potential for water use efficiency and target conservation programs.[27] The city is currently aiming for a 25 percent per capita reduction in potable water by 2035, using FY 2013/14 as a baseline.[28]

Natural Gas

The Southern California Gas Company (SoCalGas) is the principal distributor of natural gas in Southern and Central California, including the City of Los Angeles.[29] SoCal Gas projects total gas demand to decline at an annual rate of 0.6 percent from 2016 to 2035. This decline is due to projected modest economic growth, CPUC-mandated energy efficiency standards and programs, renewable electricity goals, declining industrial and commercial demand, and conservation savings from Advanced Metering Infrastructure (AMI).[30]

[22] Los Angeles Department of Water and Power, 2016 Power Integrated Resource Plan, p. ES-28-29.

[23] https://www.ladwp.com/ladwp/faces/ladwp/aboutus/a-water/a-w-sourcesofsupply, accessed June 14, 2017.

[24] Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, p. ES-2.

[25] Los Angeles Department of Water and Power, 2015 Urban Water Management Plan.

[26] Los Angeles Department of Water and Power. 2015 Urban Water Management Plan, p. ES-12

[27] Los Angeles Department of Water and Power, 2015 Urban Water Management Plan, p. ES-10.

[28] Los Angeles Department of Water and Power. 2015 Urban Water Management Plan, p. ES-14.

[29] California Gas and Electric Utilities. 2016. 2016 California Gas Report, p. 61.

[30] California Gas and Electric Utilities. 2016. 2016 California Gas Report, p. 64.

SoCalGas obtains most of its natural gas supply from sources outside of California, primarily from basins in the western United States and Canada, including New Mexico, West Texas, and the Rocky Mountains.[31]

Projected demand for natural gas in Southern California in 2020, the project completion date for the proposed Los Angeles Union Station Master Plan Stage 1 Perimeter Improvements is expected to be 2,734 MMcf/day.[32]

Transportation Energy

California currently imports two-thirds of its petroleum from out-of-state, and accounts for about 10 percent of U.S. gasoline and diesel consumption. In 2011, over 390 million barrels of crude oil were used to produce gasoline and diesel fuel consumed in California.[33]

In 2014, the most recent data available, transportation accounted for approximately 37 percent of California's greenhouse gas emissions. Therefore, the state has made the transformation of its transportation system away from fossil fuels to zero-emission and near-zero-emission vehicles powered by electricity from renewable sources a fundamental part of its efforts to achieve its climate goals.[34] The transformation of the transportation sector is also necessary to achieve the governor's goal of placing 1.5 million zero-emission vehicles on California's roadways and displacing 1.5 billion gallons of petroleum fuels by 2025.[35]

These goals are reliant on growing zero-emission vehicle sales and deploying more robust and accessible fueling infrastructure. Extensive collaboration among state agencies and partnerships with private sector stakeholders has enabled coordination between the private sector and government which has resulted in overcoming barriers to widespread adoption of zero-emission vehicles.[36]

Incentive programs, such as the California Energy Commission's Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP) are a significant aspect of the state's strategy to transform the transportation sector. This funding has helped California-based companies to develop a range of new vehicle and fueling technologies.[37]

[31] California Gas and Electric Utilities. 2016. 2016 California Gas Report, p. 79.

[32] California Gas and Electric Utilities. 2016. 2016 California Gas Report, page 21.

[33] Governor's Interagency Working Group on Zero-Emission Vehicles. February 2013. 2013 ZEV Action Plan: A Roadmap toward 1.5 Million Zero-emission Vehicles on California Roadways by 2025, p. 4.

[34] California Energy Commission Staff. 2016. 2016 Integrated Energy Policy Report Update. Publication Number: CEC-100-2016-003-CMF.

[35] Office of the Governor of California. Executive Order B-16-2012.

[36] Governor's Interagency Working Group on Zero-emission Vehicles. 2013. 2013 ZEV Action Plan: A Roadmap toward 1.5 Million Zero-emission Vehicles on California Roadways by 2025.

[37] Governor's Interagency Working Group on Zero-Emission Vehicles. 2013. 2013 ZEV Action Plan: A Roadmap toward 1.5 Million Zero-emission Vehicles on California Roadways.

The City of Los Angeles is also taking steps to reduce its reliance on petroleum fueled vehicles. In 2016, the City's Department of Transportation (LADOT) launched an electric-vehicle car sharing program. The program includes 100 electric vehicles and at least 100 electric vehicle charging stations.[38] The city also has taken steps to build out a publicly-accessible electric vehicle (EV) fueling system by partnering with the Los Angeles Department of Water and Power to purchase and install 82 Level 2 EV chargers in parking facilities throughout the city.[39]

3.7.3 Environmental Impacts/Environmental Consequences

Appendix F of the CEQA Guidelines provides a list of potential environmental impacts from energy that may be considered in an EIR. These impacts include the project's energy requirements and their effects on local and regional energy supply capacity, as well as compliance with existing energy standards and its projected transportation energy use requirements, including efficient transportation alternatives.

The potential for the proposed project to result in significant impact with regard to energy was evaluated in light of three questions:

(a) Would the proposed project conflict with adopted energy conservation and other sustainability metrics in local plans?

The proposed project would result in no impacts in regard to conflicting with adopted energy conservation and other sustainability metrics in local plans.

Construction

Construction of the proposed project would consume energy from off-road construction vehicles and equipment, as well as on-road vehicles used for construction worker travel to and from the site and delivery and haul trips (Table 3.7.3-1, *Fuel Type and Use during Construction*). Energy consumed during construction would also be required to produce and convey the water needed for dust control. However, such trips are accounted for the Southern California Association of Governments 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy.[40]

[38] Los Angeles Department of Transportation. 2016. Annual Report, Fiscal Year 2015-2016, p. 12.

[39] Los Angeles Department of Transportation. 2016. Annual Report, Fiscal Year 2015-2016, p. 5.

[40] Southern California Association of Governments. 7 April 2016. *Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.* Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf

TABLE 3.7.3-1
FUEL TYPE AND USE DURING CONSTRUCTION

Fuel Type and Use	Quantity
Diesel	
On-Road Construction Equipment	454 gallons
Off-Road Construction Equipment	61,932 gallons
Total	**62,386 gallons**
Gasoline	
On-Road Construction Equipment	760 gallons
Off-Road Construction Equipment	0 gallons
Total	**760 gallons**
Electricity	
Water Supply	3,891 kWh

SOURCE: Energy Worksheets (Appendix E to the Draft EIR).

As described in Section 2.5, *Construction Scenario and Assumptions*, the construction of the proposed project will require the use of 1 concrete saw, 1 rubber-tired dozer, 3 tractor/loader or backhoes, and 2 hydraulic excavators for the demolition phase over a period of 40 days. There will be 92 truck trips to haul away material resulting from the demolition and an additional 38 truck trips to haul away the trees which are removed. During the grading phase of construction, 2 graders and 1 rubber-tired dozer will be used for 40 days. During the paving phase of construction, 1 cement and mortar mixer, 1 paver, 1 roller, and 1 tractor/loader or backhoe will be used for 30 days. It is anticipated that 131 truck trips will be made during the paving phase. During site preparation, 1 grader will be used, 1 rubber-tired dozer, and 1 tractor/loader or backhoe will be used for 30 days. An anticipated 87 truck trips will be made to the site to deliver the new trees. An additional 10 hauling trips will be added for landscaping. During the operation of the proposed project, it is anticipated that transit use will increase, as well as bicycle and pedestrian activity, and the use of passenger vehicles will decrease to the site over time.

During construction, electricity for water supply and petroleum fuels used for on- and off-site construction equipment would be consumed. All construction vehicles and equipment would be in compliance with Metro's Green Construction Policy, thus ensuring the impacts on energy use and GHG emissions and would be less than significant. Compliance with Metro's green construction policy include restricting vehicle and equipment idling to a maximum of 5 minutes, subject to certain exceptions, and retrofitting diesel-powered construction equipment to use cleaner fuels and/or trap particulate matter. In addition, construction activities would be temporary. Therefore, there would be no long-term energy impacts associated with the construction of the proposed project.

Operation

Energy used during the operation of the proposed project would be consumed by the street lights, pedestrian lighting, and the supply of water for the interactive water feature and landscaping, as well as for the small transit-serving building.

Currently, on the project site along Alameda Street, there are 16 historic double-headed street lights and 6 single-headed cobra style street lights. The project will also add 49 bollards in the proposed forecourt and along the proposed Alameda Street median. During operation of the proposed project, energy would be consumed by the streetlamps and pedestrian lighting in the forecourt area, along the Alameda Esplanade, and in the Alameda Street median. Metro has the goal to retrofit all of the street light fixtures located in the project area to LED bulbs, while retaining the historic street light uprights, in adherence to the City of Los Angeles Bureau of Street Services street light LED conversion program. LED lighting technology is more efficient consistent with adopted energy conservation and other sustainability metrics in local plans.[41]

Metro has a commitment to reduction of water use at their facilities. In 2009, the Metro Board adopted a water use and conservation policy.[42] This was followed by the adoption of their Water Action Plan in 2010.[43] In the midst of a long-term statewide drought in June 2015, the Metro Board adopted a drought awareness motion requiring the agency to reduce amount of potable water use by 20 percent by 2017 from the 2015 baseline.[44] As part of the Environmental Management System (EMS), Metro has tracked water consumption at their facilities since 2014.

The proposed project will include a new interactive water feature and a net increase of 49 trees to the project site. The current project description includes a well for each new tree that would allow for the planting of additional trees without increasing the consumptive use of water, consistent with Metro's Water Action Plan.[45] In addition, the proposed landscaping would consist of native species and be drought tolerant once established. Each new tree will require an estimated 168 gallons of water to become established and approximately 365 gallons of water annually to maintain.[46] The use of native and drought tolerant trees adheres to the City of Los Angeles Alameda District Specific Plan requirement that drought-tolerant and low water consuming plant varieties are to be used to reduce irrigation water consumption in new landscaped areas such as pedestrian plazas, walkways, and other open spaces. Therefore, the proposed project would result in no impacts in regard to conflicting with adopted energy conservation and other sustainability metrics in local plans.

The interactive water feature is anticipated to use a water recirculation system requiring approximately 160 gallons of water per minute (GPM), therefore, using just under 55,000 gallons a day[47] to operate.

[41] https://blog.lsgc.com/street-lighting-comparison-led-vs-hps/, accessed 16 June 2017.

[42] http://media.metro.net/about_us/sustainability/images/Water-Use-and-Conservation-GEN-52-Policy.pdf, accessed 16 June 2017.

[43] http://media.metro.net/projects_studies/sustainability/images/Water_Plan2010_0825.pdf, accessed 16 June 2017.

[44] http://libraryarchives.metro.net/DB_Attachments/150625_Motion_52_Drought_Awareness.pdf, accessed 16 June 2017.

[45] Los Angeles County Metropolitan Transportation Authority. June 2010. Water Action Plan. Available at: http://media.metro.net/projects_studies/sustainability/images/Water_Plan2010_0825.pdf

[46] https://bss.lacity.org/UrbanForestry/StreetTree/TreePlanting.htm, accessed 15 June 2017.

[47] Recreation Management. Accessed 13 June 2017. Splashplay, Splashpads Get Greener, Innovative Systems Reuse and Replenish Every Splash.

This equates to approximately 535 kWh in energy required daily to provide that water to the water feature. Interactive water features are not covered by any locally adopted energy conservation and other sustainability metrics in local plans, therefore, the energy impacts from this project feature would be less than significant.

The small transit-serving building would feature water efficient fixtures, including a toilet, a urinal, and a sink. Together, these fixtures would utilize 25.7 kWh/year.[48] The use of water efficient fixtures would be consistent with local plans and policies requiring energy efficient buildings.

Metro has determined that Los Angeles Union Station, as a major transit hub in Southern California, has facilitated the occurrence of compact and transit-oriented development in the vicinity. The proposed project improvements would further enhance the forecourt and pedestrian and bicycling connections to El Pueblo de Los Angeles Historic Park; Father Serra Park; and other nearby amenities, businesses, and neighborhoods in a manner that would be expected to continue to encourage the use of alternative modes of travel and reduce per capita vehicle miles traveled.

The proposed project is not expected to use any natural gas.

(b) Would the proposed project use energy resources in a wasteful and inefficient manner?

The proposed project would result in less than significant impact to using energy resources in a wasteful and inefficient manner. Specific measures incorporated into the proposed project design would ensure that energy is being used in the most efficient manner possible. If the bollards are equipped with lighting, LED technology would be utilized. Metro's goal is to retrofit the existing streetlamps to also utilize LED technology. This would significantly reduce the electricity needed to power the street lights versus the electricity requirements for standard street lights; therefore, these project components would use the most efficient lighting technology currently available for these applications. The streetlamps, if retrofitted to utilize LED technology, would use an average of 63 percent less energy than current energy use.[49]

The project is designed to utilize a series of swales in addition to permeable paving to receive and infiltrate a majority of the site's stormwater drainage in the forecourt. This will help to reduce the amount of water needed to be imported for landscaping purposes. The proposed interactive water feature will utilize a water recirculation system to ensure the most efficient use of water for this type of project feature. Because the proposed project design features the use of energy and water efficient technologies, as well as the construction of swales and use of permeable paving in the forecourt to promote the capture of on-site water, the proposed project would have a less than significant impact on using energy resources in a wasteful and inefficient manner.

[48] California Code of Regulations, Title 20, Public Utilities and Energy.

[49] https://energy.gov/eere/ssl/city-los-angeles-led-streetlight-program, accessed 16 June 2017.

(c) Would the proposed project decrease reliance on fossil fuels such as coal, natural gas, and oil?

The proposed project would result in less than significant impacts in regard to decreasing reliance on fossil fuels such as coal, natural gas, and oil. During construction, the energy consumed would be from the electricity for the water supplied for fugitive dust mitigation and the petroleum fuels used for on- and off-site construction equipment. Because the construction activities would be temporary, there would be no long-term energy impacts associated with the construction of the proposed project.

The proposed project is being designed to decrease transportation energy use by encouraging more pedestrian, bicycle, and transit connectivity to Los Angeles Union Station. The sidewalks within the project area will be widened. Bicycle kiosks will remain on the site. New and enhanced bus shelters will be constructed. According to SCAG's research on the impact of active transportation on high quality transit areas, transit use could increase up to 53 percent by 2040 with the development of infrastructure projects that encourage active transportation, such as the proposed project. [50] Therefore, it is anticipated that the proposed project would result in an increase in active transportation and transit use, and the use of personal automobiles and the commensurate consumption of petroleum fuel would decrease over the long term. Thus, the proposed project would result in a less than significant impact to decreasing reliance on fossil fuels such as coal, natural gas, and oil.

3.7.4 Cumulative Impacts

The potential for cumulative impacts was evaluated in relation to each of the three questions proposed above because Appendix F of the CEQA Guidelines does not provide thresholds of significance for energy. The proposed project would be expected to yield a net reduction in the consumptive use of fossil fuels by facilitating alternative modes of travel, including bicycling and walking. This would contribute to a per capita reduction in vehicle miles traveled, and a corresponding reduction in consumptive use of fossil fuels. As there are no direct, indirect, or cumulative impacts on energy resources, no mitigation is required.

3.7.5 Mitigation Measures

No mitigation would be required.

3.7.6 Level of Significance after Mitigation

Impacts would be less than significant.

[50] Southern California Association of Governments. Accessed 20 January 2017. *2016-2040 RTP/SCS. Transportation Systems Active Transportation Appendix*, p. 69, Tables 18, 19.

3.8 Geology and Soils

This section of the Environmental Impact Report (EIR) analyzes potential impacts to geology and soils from construction, operation, and maintenance of the proposed Forecourt and Esplanade Improvements Project (proposed project). The analysis of geology and soils consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

Geology and soils were evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act (CEQA) Guidelines .

3.8.1 Regulatory Setting

Federal

Earthquake Hazards Reduction Act (1977)

The Earthquake Hazards Reduction Act of 1977 (Public Law 95-124) established the National Earthquake Hazards Reduction Program which is coordinated through the Federal Emergency Management Agency (FEMA), the U.S. Geological Survey (USGS), the National Science Foundation, and the National Institute of Standards and Technology. The purpose of the Program is to establish measures for earthquake hazards reduction and promote the adoption of earthquake hazards reduction measures by federal, state, and local governments; national standards and model code organizations; architects and engineers; building owners; and others with a role in planning and constructing buildings, structures, and lifelines through (1) grants, contracts, cooperative agreements, and technical assistance; (2) development of standards, guidelines, and voluntary consensus codes for earthquake hazards reduction for buildings, structures, and lifelines; and (3) development and maintenance of a repository of information, including technical data, on seismic risk and hazards reduction. The Program is intended to improve the understanding of earthquakes and their effects on communities, buildings, structures, and lifelines through interdisciplinary research that involves engineering, natural sciences, and social, economic, and decisions sciences.

Disaster Mitigation Act (2000)

The federal Disaster Mitigation Act (DMA; Public Law 106-390) provides the legal basis for FEMA mitigation planning requirements for state, local, and Native American Tribal governments as a condition of mitigation grant assistance. DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for state, local, and Native American Tribal entities to closely coordinate mitigation planning and implementation efforts. The requirement for a state mitigation plan is continued as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of

requirements for two different levels of state plans. DMA 2000 also established a new requirement for local mitigation plans and authorized up to 7 percent of Hazard Mitigation Grand Program funds available to a state for development of state, local, and Native American Tribal mitigation plans.

National Engineering Handbook

The National Engineering Handbook (National Resources Conservation Service, 1983) Sections 2.0 and 3.0, provides standards for soil conservation and the prevention of soil erosion during planning, design, and construction activities. These standards must be adhered to during grading and construction to limit soil erosion.

Clean Water Act of 1972, as Amended (CWA)

The CWA was originally enacted as the Federal Water Pollution Control Act (FWPCA; Public Law 92-500) in 1948. The law was completely rewritten in 1972 in an act entitled the Federal Water Pollution Control Act Amendments of 1972, now commonly known as the CWA. Major changes have subsequently been introduced via amendatory legislation, including the Clean Water Act of 1977, and the Water Quality Act of 1987. The CWA is the primary federal law in the United States governing water pollution. Its objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. It is one of the United States first and most influential modern environmental laws. As with many other major U.S. federal environmental statutes, it is administered by the U.S. EPA, in coordination with state governments. Its implementing regulations are codified at 40 C.F.R. Subchapters D, N, and O (Parts 100–140, 401–471, and 501–503).

Uniform Building Code (UBC)

The UBC is published by the International Conference of Building Officials and forms the basis for California's building code, as well as approximately half of the state building codes in the United States. It has been adopted by the California Legislature to address the specific building conditions and structural requirements for California, as well as provide guidance on foundation design and structural engineering for different soil types. The UBC defines and ranks the regions of the United States according to their seismic hazard potential. There are four types of regions defined by Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest.

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Act (California Code of Regulations, Section 3603(f)) provides policies and criteria to assist cities, counties, and State agencies in the development of structures for human occupancy across the trace of active faults. The Alquist-Priolo Act was intended to provide the citizens of the state with increased safety and to minimize the loss of life during and immediately following earthquakes by

facilitating seismic retrofitting to strengthen buildings, including historical buildings, against ground shaking. The Alquist-Priolo Act requires that special geologic studies be conducted to locate and assess any active fault traces in and around known active fault areas prior to development of structures for human occupancy. This state law was a direct result of the 1971 San Fernando Earthquake, which was associated with extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures. The Alquist-Priolo Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. This Act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (Public Resources Code, Chapter 7.8, Sections 2690–2699.6) addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides. The purpose of the Act is to protect the public from the effects of strong ground shaking, liquefaction, landslides, or other ground failure; and other hazards caused by earthquakes. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Act.

Natural Hazards Disclosure Act

The Natural Hazards Disclosure Act came into effect June 1, 1998, and requires that sellers of real property and their agents provide prospective buyers with a "Natural Hazard Disclosure Statement" when the property being sold lies within one or more State-mapped hazard areas.

Stormwater BMP Handbook

The California Stormwater BMP Handbooks provide guidance on stormwater runoff best management practices. The handbooks were originally published by the Stormwater Quality Task Force in 1993. The Stormwater Quality Task Force became the California Stormwater Quality Association (CASQA) in 2002. In 2003 CASQA published an updated and expanded set of four BMP Handbooks. These Handbooks reflect the current practices, standards, and significant amount of knowledge gained since the early 1990s about the effectiveness of BMPs.

California Building Code

The California Building Code is another name for the body of regulations contained in Title 24, Part 2, of the California Code of Regulations (CCR), which is a portion of the California Building Standards Code (CBSC). Title 24 is assigned to the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. Published by the International Conference of Building Officials, the UBC is a widely-adopted model building code in the United States. The California Building Code incorporates by reference the UBC with necessary California amendments. Approximately one-third of the text within the California Building Code has been tailored for California earthquake hazards.

Although widely accepted and implemented throughout the state, local jurisdictions can adopt the UBC either in whole or in part.

California Department of Transportation (Caltrans) Regulations

Caltrans' jurisdiction includes rights-of-way (ROWs) of state and interstate routes within California. Any work within the ROW of a federal or state transportation corridor is subject to Caltrans' regulations governing allowable actions and modifications to the ROW. Caltrans issues permits to encroach on land within their jurisdiction to ensure encroachment is compatible with the primary uses of the State Highway System, to ensure safety, and to protect the state's investment in the highway facility. The encroachment permit requirement applies to persons, corporations, cities, counties, utilities, and other government agencies. A permit is required for specific activities including opening or excavating a state highway for any purpose, constructing, or maintaining road approaches or connections, grading within ROWs on any state highway, or planting or tampering with vegetation growing along any state highway. The encroachment permit application requirements relating to geology, seismicity and soils include information on road cuts, excavation size, engineering and grading cross-sections, hydraulic calculations, and mineral resources approved under Surface Mining Area Reclamation Act (SMARA).

Caltrans Seismic Design Criteria

Caltrans Seismic Design Criteria was initiated through the recognition that past earthquakes in California have shown the vulnerability of some older structures, designed with non-ductile design standards to earthquake-induced force sand deformations. As a result, Caltrans initiated an extensive seismic retrofit program to strengthen the state's inventory of bridges to ensure satisfactory performance during anticipated future earthquakes. Caltrans has funded an extensive research program as well as developed design procedures that have contributed to the state of practice of earthquake bridge engineering. The Seismic Design Criteria (SDC) is an encyclopedia of new and currently practiced seismic design and analysis methodologies for the design of new bridges in California. The SDC adopts a performance-based approach specifying minimum levels of structural system performance, component performance, analysis, and design practices for ordinary standard bridges. Bridges with non-standard features or operational requirements above and beyond the ordinary standard bridge may require a greater degree of attention than specified by the SDC.

Southern California Catastrophic Earthquake Preparedness Plan

The Southern California Catastrophic Earthquake Preparedness Plan, adopted in 2008, examines the initial impacts, inventories resources, cares for those wounded and homeless, and develops a long-term recovery process after major earthquakes. The process of Long-Term Regional Recovery (LTRR) provides a mechanism for coordinating federal support to state, tribal, regional, and local governments; nongovernmental organizations (NGOs); and the private sector to enable recovery from long-term consequences of extraordinary disasters. The LTRR process accomplishes this by identifying and facilitating the availability and use of recovery funding sources, and providing technical assistance (such as impact analysis) for recovery and recovery planning support. "Long term" refers to the need to

reestablish a healthy, functioning region that would sustain itself over time. Long-term recovery is not debris removal and restoration of utilities, which are considered immediate or short-term recovery actions. The LTRR's three focus areas are housing, infrastructure (including transportation), and economic development.

Local

City of Los Angeles Municipal Code – Chapter IX – Building Regulations

The City of Los Angeles Municipal Code Chapter IX – Building Regulations contains land development and resource avoidance restrictions, and codes pertaining to grading, land development, public safety, and other related issues. The City of Los Angeles requires that all grading operations be conducted in conformance with the City Municipal Code, Chapter IX, as well as the most recent International Building Code (IBC).

City of Los Angeles General Plan

The Safety Element of the City of Los Angeles General Plan was written to establish the City's approach to ensure a safe environment for residents, visitors, and businesses. The Safety Element establishes goals, policies, and implements programs to guide this effort.

The City of Los Angeles Safety Element of the General Plan contains the following goal in relation to geology and soils:

HAZARD MITIGATION

GOAL 1

A city where potential injury, loss of life, property damage and disruption of the social and economic life of the City due to fire, water related hazard, seismic event, geologic conditions or release of hazardous materials disasters is minimized.

Objective 1.1

Implement comprehensive hazard mitigation plans and programs that are integrated with each other and with the City's comprehensive emergency response and recovery plans and programs.

Policies

1.1.6 State and federal regulations. Assure compliance with applicable state and federal planning and development regulations, e.g., Alquist-Priolo Earthquake Fault Zoning Act, State Mapping Act and Cobey-Alquist Flood Plain Management Act. (All EOO natural hazard enforcement and implementation programs relative to non-City regulations implement this policy.)

3.8.2 Affected Environment/Existing Conditions

This section was based in part on a geotechnical analysis previously prepared for the project area.[1]

Geological Setting

The Los Angeles Basin is located at the southern boundary of the Transverse Ranges Geomorphic Region of California, characterized by east-west trending fault-block mountain ranges and basins in the south-central region of western California. The project study area is on the northern margin of the Los Angeles Coastal Plain within the Los Angeles River narrows and forebay area, where the river divides the southern foothills of the east-west trending Santa Monica Mountains. The project study area lies on the southern limb of the actively growing Elysian Park anticline, which has formed as a fault-propagation fold at the tip of the underlying Elysian Park blind-thrust fault.[2]

The project study area is located on younger Quaternary-aged alluvial fan material associated with the narrows and forebay of the Los Angeles River (Figure 3.8.2-1, *Geologic Formations*). The river plain is approximately 2 miles wide within the project area and is flanked by terraces and low rolling hills of the Puente and Fernando bedrock formations on the east and west sides.[3] The alluvial sediments consist primarily of river sand (generally well sorted, with little or no fines) with lenses of gravel and cobbles. Alluvium at the project study area is up to 120 feet thick. Marine siltstone and sandstone bedrock of the Puente and Fernando Formations underlie the alluvium. Maps from the California Division of Oil, Gas, and Geothermal Resources (DOGGR) show the Union Station Oil Field located approximately 0.25 mile south of the project study area near Temple Street.[4]

[1] Diaz-Yourman & Associates. 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*. Prepared for: Los Angeles County Metropolitan Transportation Authority.

[2] Bilodeau, W.L., S.W. Bilodeau, E.M. Gath, M. Oborne, and R.J. Proctor. May 2007. Geology of Los Angeles, California, United States of America. *Environmental & Engineering Geoscience*, *XIII* (2).

[3] California Geological Survey. 1970. *Special Report 101: Geology of the Elysian Park-Repetto Hills Area, Los Angeles County*.

[4] California Division of Oil, Gas, and Geothermal Resources. February 2011. Oil Field Map W1-2.

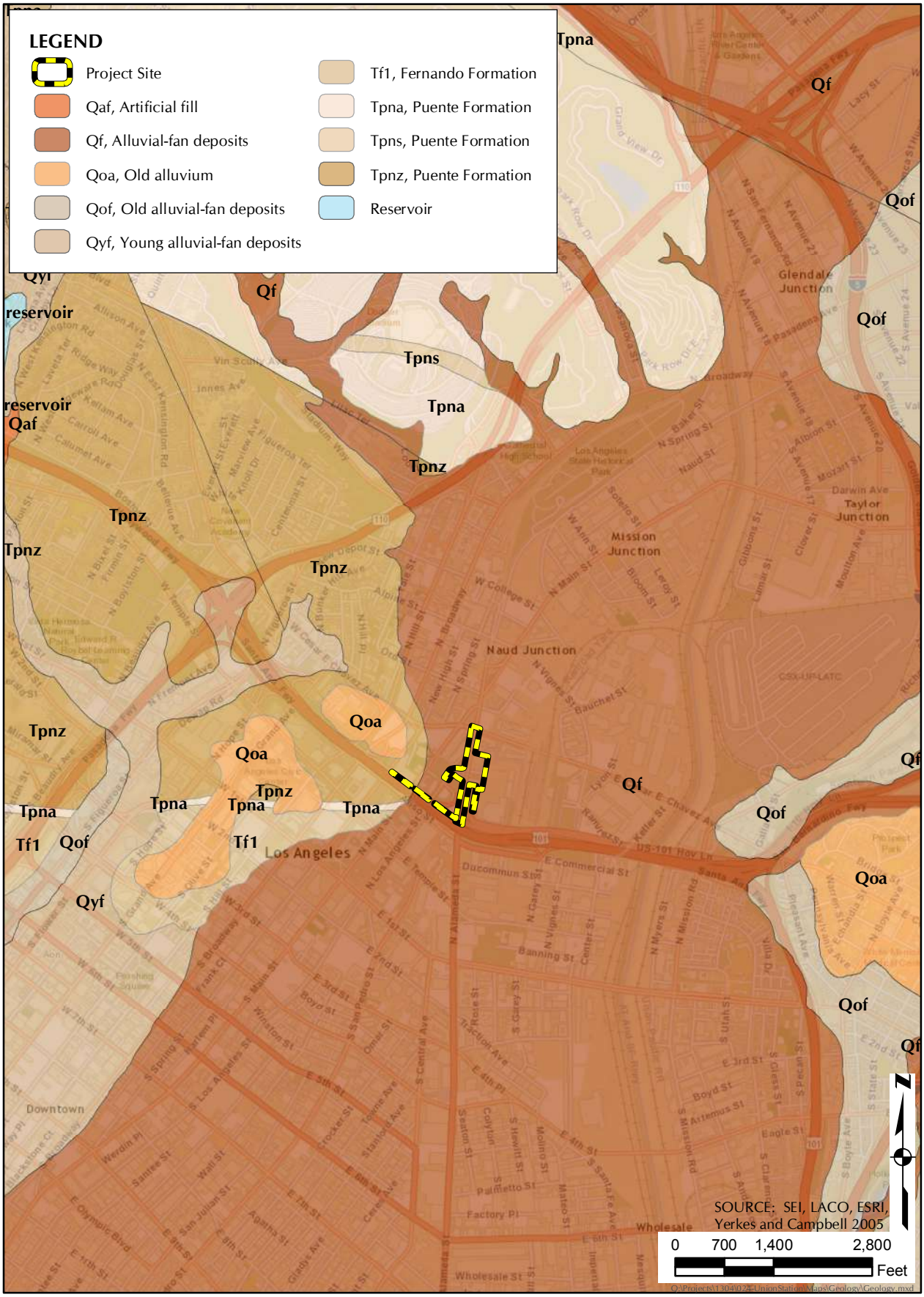


Figure 3.8.2-1. Geologic Formations

Rupture of a Known Earthquake Fault

Faults adjacent to, within, and beneath the City of Los Angeles may be classified as inactive, potentially active, or active. Regional faults of concern are strike slip faults (e.g., San Andreas, San Jacinto, Elsinore, Newport-Inglewood); normal, reverse, and thrust faults (e.g., Santa Monica-Hollywood, Sierra Madre-San Fernando, Palos Verdes, Raymond, and Verdugo); and buried (blind) thrust faults (e.g., Puente Hills, Northridge, and Elysian Park) (Figure 3.8.2-2, *Earthquake Faults*).[5] This seismotectonic setting has been a part of the evolution of the Los Angeles County landscape for the past 5 million years.[6]

No known active faults are located within the project study area, and the project study area is not located within the 2001 CGS Alquist-Priolo (AP) Earthquake Fault Zone (APEFZ) map[7] or City of Los Angeles Safety Element Fault Rupture Study Areas.[8]

Strong Seismic Ground Shaking

The project study area is located within a seismically active region. The characteristics of nearby faults based on the Caltrans fault database are summarized in Table 3.8.2-1*, Major Fault Characterization in the Project Vicinity*.[9]

[5] California Geological Survey. 2010. 2010 Fault Activity Map of California. Available at: http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html.

[6] Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*.

[7] California Geological Survey. 2001. Alquist-Priolo Earthquake Fault Zone (APEFZ) maps, Geographic Information System (GIS) data files.

[8] City of Los Angeles Department of City Planning. Adopted 26 November 1996. *Safety Element of the Los Angeles City General Plan, City Plan Case No. 95-0371*.

[9] Caltrans. 2007. Caltrans 2007 fault database.

TABLE 3.8.2-1
MAJOR FAULT CHARACTERIZATION IN THE PROJECT VICINITY

Fault[1]	Approximate Distance[2] (miles)	Type of Fault[1]	Maximum Earthquake Magnitude[1] (Mw)
Upper Elysian Park Blind Thrust (FID=329)	0.9	R	6.4
Puente Hills Blind Thrust (FID=420)	2.2	R	7.3
Raymond (FID=281)	4.5	LLSS	6.6
Hollywood (FID=282)	4.7	LLSS	6.6
Eagle Rock Fault (FID=218)	7.0	R	6.8
Verdugo Fault (FID=418)	5.8[3]	R	6.9
Newport Inglewood-Rose Canyon Fault Zone (N. Los Angeles Basin section) (FID=144)	8.2	RLSS	7.5
Elsinore Fault Zone (Whittier section) (FID=241)	5[3]	RLSS	7.6
Sierra Madre Fault Zone (Sierra Madre D section) (FID=296)	17.2	R	7.2

NOTE:
[1] Available in Caltrans 2007 fault database.
[2] Horizontal distance (Rx) from the fault trace to the project study area is measured using the ruler function available in Caltrans ARS online tool (Caltrans, 2009). The Rx distance is defined as the closest distance to the fault trace or surface projection of the top of the rupture plane.
[3] The project study area is offset from the fault. Rx measurement is taken based on projection of the fault to the project study area.

- LLSS = Left lateral strike slip fault.
- RLSS = Right lateral strike slip fault.
- R = Reverse fault.
- FID = Fault identification number

Seismic-Related Ground Failure, Including Liquefaction

Liquefaction occurs when saturated, low relative density, low plastic materials are transformed from a solid to a near-liquid state. This phenomenon occurs when moderate to severe ground shaking causes pore-water pressure to increase. Site susceptibility to liquefaction is a function of the depth, density, soil type, and water content of granular sediments, along with the magnitude and frequency of earthquakes in the surrounding region. Saturated sands, silty sands, and unconsolidated silts within 50 feet of the ground surface are most susceptible to liquefaction. Liquefaction-related phenomena include lateral spreading, ground oscillation, flow failures, loss of bearing strength, subsidence, and buoyancy effects. The expected level of ground shaking in the proposed project area is high.[10]

[10] California Geological Survey. 25 March 1999. Seismic Hazard Zones, Los Angeles Quadrangle, Los Angeles County, California.

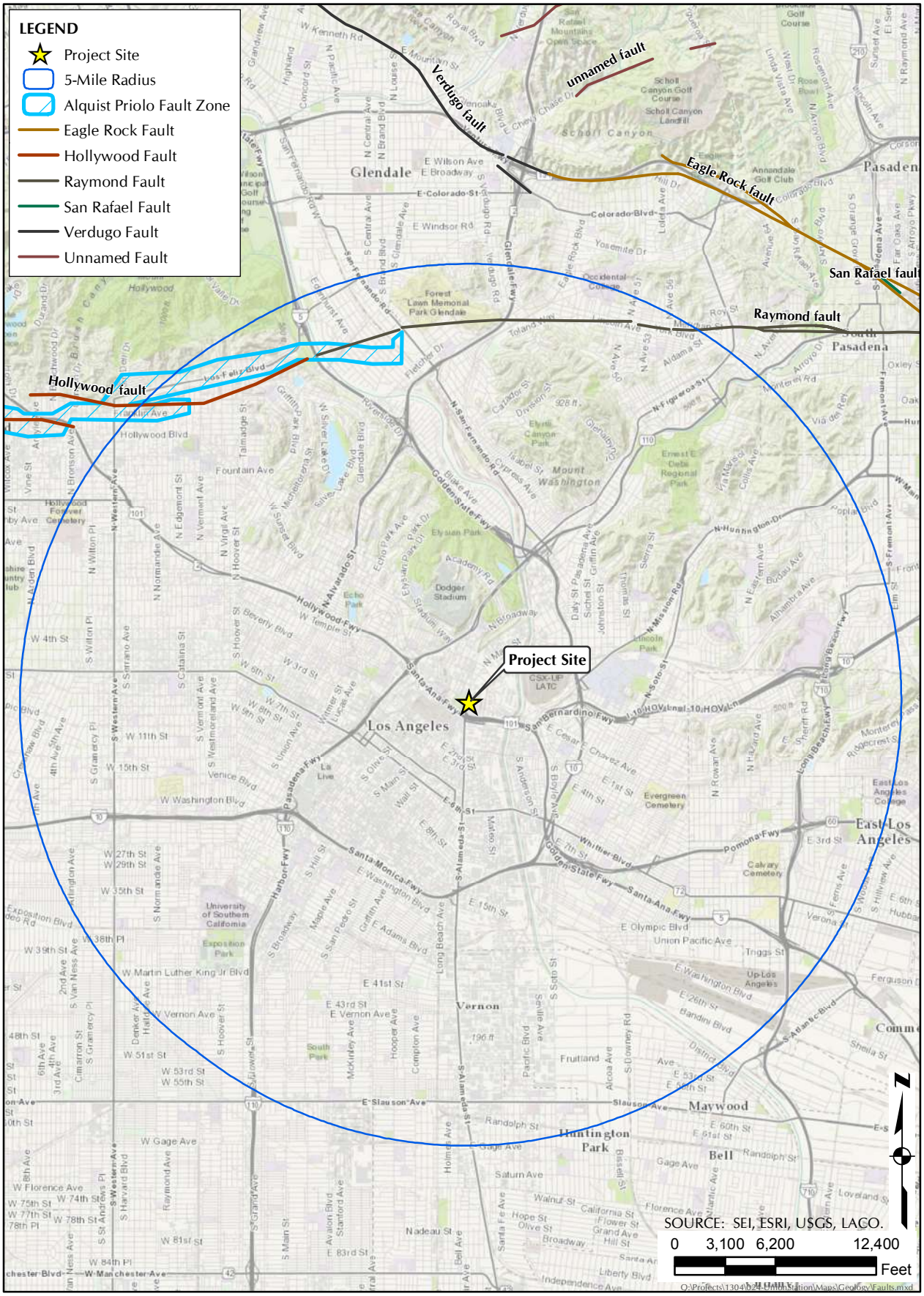


Figure 3.8.2-2. Earthquake Faults

Based on previous geotechnical investigations,[11,12] the proposed project area is unlikely to be susceptible to liquefaction (Figure 3.8.2-3, *Liquefaction Risk*).

Landslides

The project study area is not located within a landslide potential zone designated on a CGS seismic hazard map or areas designated by the City of Los Angeles Hillside Ordinance or the County of Los Angeles. Based on the relatively level topography of the project study area, the landslide potential is low.[13]

Substantial Soil Erosion or the Loss of Topsoil

Soils in the project study area are not subject to substantial erosion because there is little topographic gradient, and the majority of the project study area is covered with impervious surfaces (Figure 3.8.2-4, *Soils*). Construction activities that would disturb soils include demolition, excavation, mass site grading, fine site grading, and trenching. Soil erosion may occur during rain and high wind events. Site preparation and construction of the project would be in accordance with all federal, state, and City building codes. As noted in the project description, the construction contractor would be required to incorporate BMPs consistent with the guidelines provided in the *California Storm Water Best Management Practice Handbooks: Construction*.[14]

Unstable Geologic Unit or Soil Off-Site Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse

The project study area is not located on an unstable geologic unit. Seismic settlement often occurs when loose to medium-dense granular soils densify during ground shaking. If such settlement were uniform beneath a given structure, damage would be minimal. Because of variations in distribution, density, and confining conditions of the soils, however, such settlement is generally non-uniform and can cause serious structural damage. Dry and partially saturated soils as well as saturated granular soils are subject to seismically-induced settlement. Generally, differential settlements induced by ground failures such as liquefaction, flow slides, and surface ruptures would be much more severe than those caused by

[11] Diaz Yourman & Associates. Revised 29 October 2009. Geotechnical Investigation, Union Station, Mail Dock Conversion to Passenger Platform, Los Angeles, California.

[12] Diaz Yourman & Associates. Revised 4 August 2010. *Preliminary Foundation Report, Union/Patsaouras Plaza Busway Station, 07-LA-10PM 17.20, LA Busway Bridge OH, Bridges Nos. 53-2673 &53-New (POC), Los Angeles, California*.

[13] Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*.

[14] California Stormwater Quality Association. January 2003. *California Storm Water Best Management Practice Handbooks: Construction*. Menlo Park, CA. Available at: http://www.cabmphandbooks.com/Construction.asp

densification alone. The natural sandy soils encountered in previous exploratory borings at the project study area are not in the loose to medium-dense category, and are not prone to seismic settlement or differential compaction. Therefore, the potential for seismic settlement and differential compaction of the natural soils beneath the project study area will have little impact on the proposed development. However, the presence of deep fills at the project study area could result in significant seismic settlement and associated damage to the proposed structures.[15] The nearest landslide potential zone designated on a CGS seismic hazard map or areas designated by the City of Los Angeles Hillside Ordinance is located approximately 0.5 mile north of the project study area north of the 110 freeway. Based on the relatively level topography of the project study area, the landslide potential is low.[16] The project study area is not in an area of known ground subsidence due to the extraction of fluids (petroleum or groundwater). No known subsidence has been associated with the nearby Union Station Oil Field or the Los Angeles City Oil Field.[17] Based on previous nearby investigations, liquefaction is not a problem in the general area. However, the liquefaction potential at the project study area should be evaluated during the project specific geotechnical investigations.[18]

Expansive and Corrosive Soils

Expansive soils are subject to changes in volume and settlement in response to wetting and drying, often resulting in severe damage to structures. Expansive soils have a significant amount of clay particles that can exude water (shrink) or absorb and hold water (swell). The resultant changes in soil volumes exert stress on buildings and other loads placed on these soils. The entire project study area is underlain with young alluvial fan deposits consisting of unconsolidated to slightly consolidated, undissected to slightly dissected boulder, cobble, gravel, sand, and silt deposits issued from a confined valley or canyon.[19] As a result of the type of soils on the project study area, expansive soils are not expected to be a concern.

[15] Law/Crandal Inc. 31 March 1995. *Report of Geotechnical Evaluation for Environmental Impact Report Alameda District Plan Master Plan Program EIR.*

[16] Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California.*

[17] Law/Crandal Inc. March 31, 1995. *Report of Geotechnical Evaluation for Environmental Impact Report Alameda District Plan Master Plan Program EIR*.

[18] Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*.

[19] Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*.

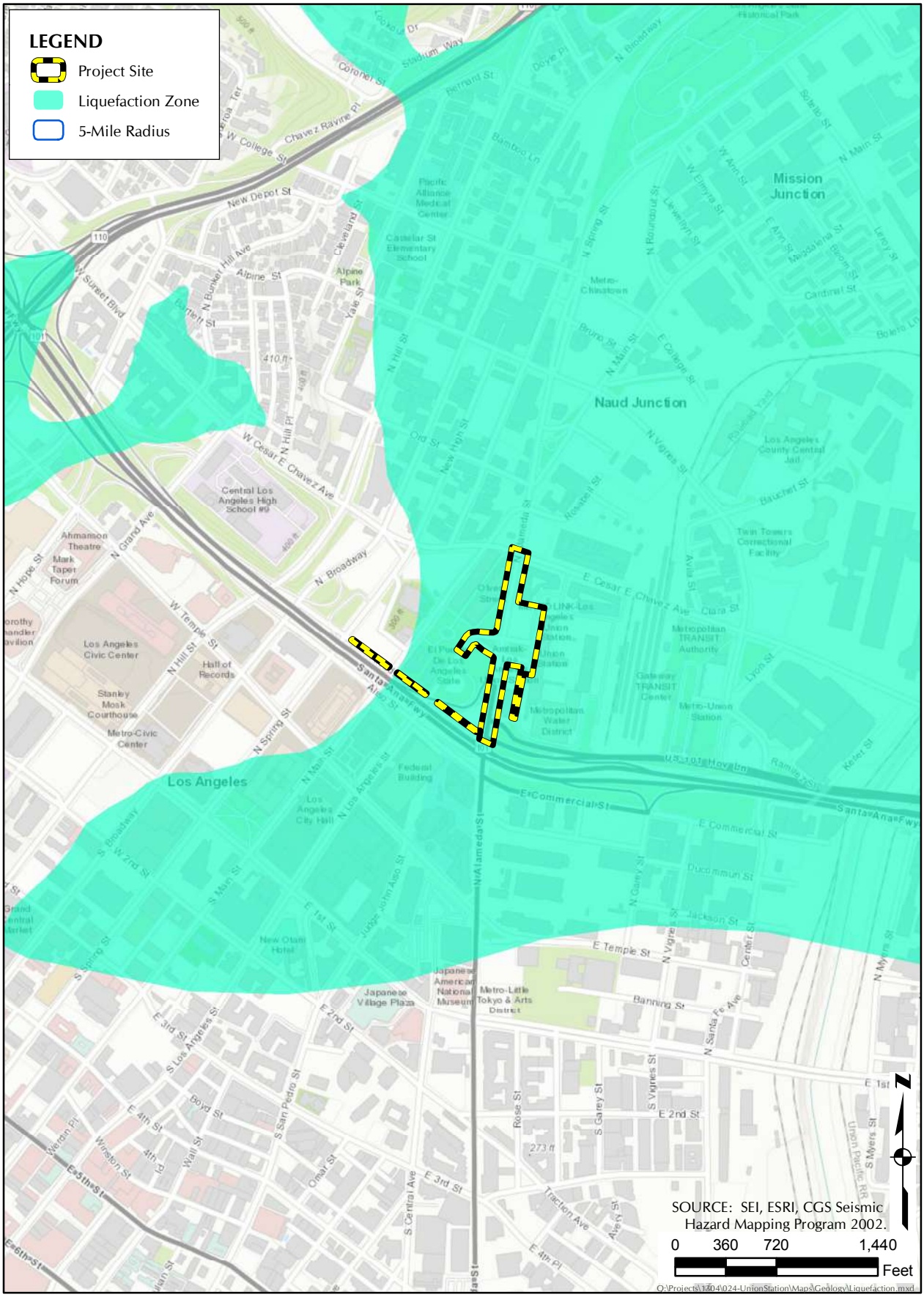


Figure 3.8.2-3. Liquefaction Risk

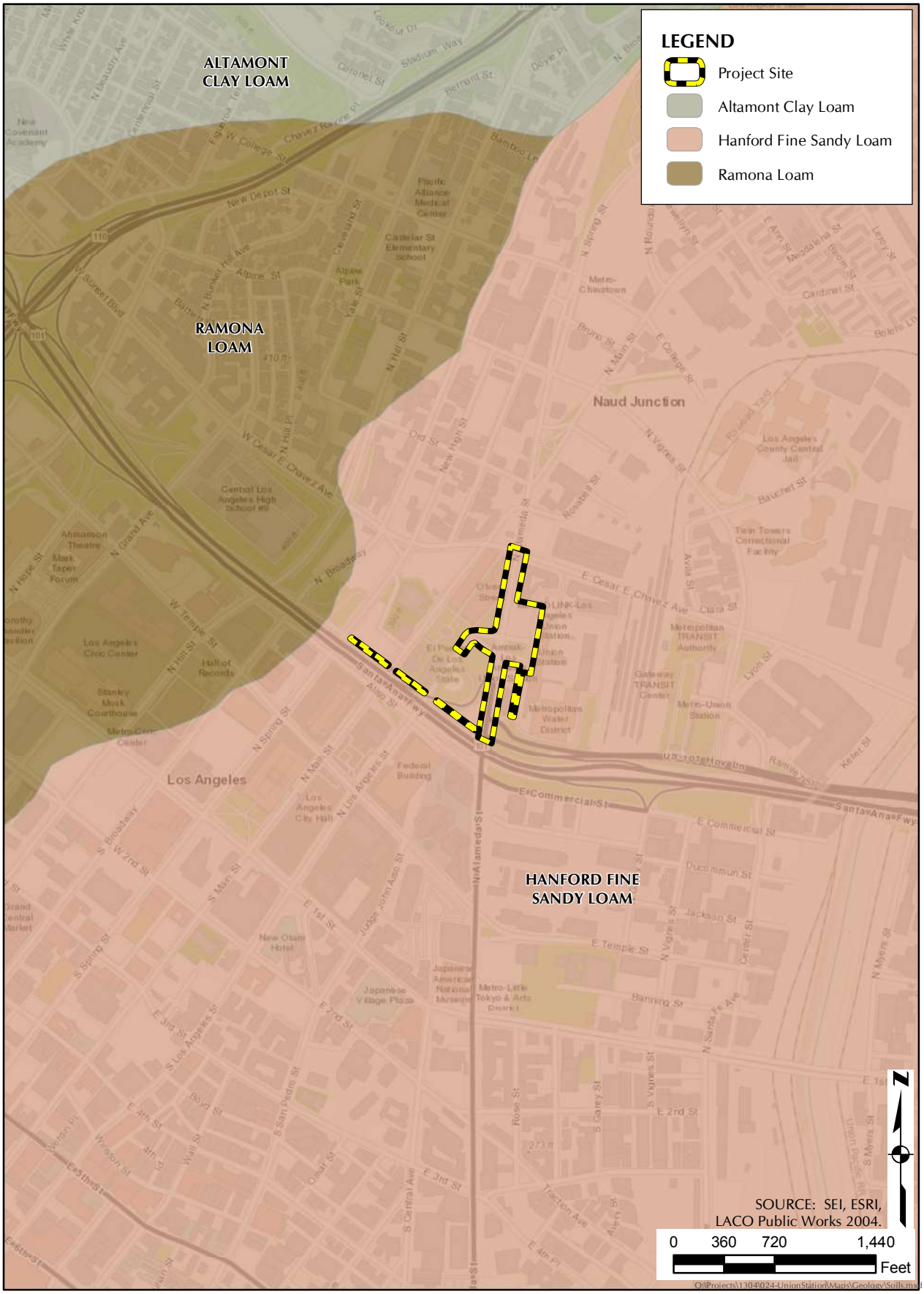


Figure 3.8.2-4. Soils

Soil corrosivity is related to several key parameters: soil resistivity, presence of chlorides and sulfates, oxygen content, and ph. Typically, the most corrosive soils are those with the lowest pH and highest concentration of chlorides and sulfates. High sulfate soils are corrosive to concrete and may prevent complete curing, reducing its strength considerably. Low pH and/or low resistivity soils could corrode buried or partially buried metal structures. Based on Caltrans and County of Los Angeles standards and previous laboratory testing of soils and groundwater within the project study area,[20,21] the on-site soils and groundwater are classified as severely corrosive to buried metal pipes, and Type V cement is recommended to mitigate for elevated soluble sulfate content.[22]

Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Waste Water Disposal Systems

The proposed project's sanitary sewer flows will be connected to municipal sewer systems. Septic tanks or alternative wastewater disposal systems are not proposed by the project or related projects.

3.8.3 Environmental Impacts/Environmental Consequences

Potential impacts were determined by comparing the effects of the project to geology and soil resources in relation to the five questions in the State CEQA Guidelines, inclusive of four subquestions related to seismic shaking. Would the proposed project:

(a)(i) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The proposed project would result in no impact to geology and soils in relation to exposing people or structures to potential substantial effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. No known active faults are located within the project study area, and the project study area is not located within the 2001 CGS AP Earthquake Fault Zone (APEFZ) map[23] or City of

[20] Diaz Yourman & Associates. Revised 29 October 2009. Geotechnical Investigation, Union Station, Mail Dock Conversion to Passenger Platform, Los Angeles, California.

[21] URS. 28 November 2001. Geotechnical Investigation Report, Proposed 3-Story Office Building, Los Angeles, California.

[22] Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*.

[23] California Geological Survey. 2001. Alquist-Priolo Earthquake Fault Zone (APEFZ) maps, Geographic Information System (GIS) data files.

Los Angeles Safety Element Fault Rupture Study Areas.[24] As such the proposed alternatives would not be at risk of damage from surface fault ruptures of any known faults. Therefore, the proposed project would result in no impact to exposing people or structures to potential substantial effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault. The consideration of mitigation measures is not required.

(a)(ii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The proposed project would not result in a significant impact to geology and soils in relation to exposing people or structures to potential adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. While the proposed project is in a seismically active region and would result in a change to the surface structure and use of some portions of the project area, it would not represent a change in land use from the existing environment. As such, it is not anticipated to exacerbate the project area's existing vulnerability to strong seismic ground shaking events. All structures will be designed in accordance with appropriate industry standards, including established engineering and construction practices and methods. Therefore, the proposed project would result in less than significant impacts to the project area's vulnerability to strong seismic ground shaking. The consideration of mitigation measures is not required.

(a)(iii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving Seismic-related ground failure, including liquefaction?

The proposed project would result in a less than significant impact to geology and soils in relation to exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Liquefaction within the study area during a seismic event would result in the loss of structural integrity of the perimeter improvements and the surrounding structures. Damage or collapse of these structures would put human lives in the vicinity at risk of bodily injury or death. While the study area is located within a CGS-mapped liquefaction zone, previous geotechnical investigations[25,26] have found the area unlikely to be susceptible to liquefaction. Therefore, the proposed project would result in less than significant impacts to geology and soils from seismic ground failure. The consideration of mitigation measures is not required.

[24] City of Los Angeles Department of City Planning. Adopted 26 November 1996. *Safety Element of the Los Angeles City General Plan, City Plan Case No. 95-0371*.

[25] Diaz Yourman & Associates. Revised 29 October 2009. Geotechnical Investigation, Union Station, Mail Dock Conversion to Passenger Platform, Los Angeles, California.

[26] Diaz Yourman & Associates. Revised 4 August 2010. *Preliminary Foundation Report, Union/Patsaouras Plaza Busway Station, 07-LA-10PM 17.20, LA Busway Bridge OH, Bridges Nos. 53-2673 &53-New (POC), Los Angeles, California*.

(a)(iv) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The proposed project would result in no impact to geology and soils in relation to exposing people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. Based on the relatively level topography of the project study area, the landslide potential is low.[27] Therefore, the proposed project would result in no impacts, and the consideration of mitigation measures is not required.

(b) Result in substantial soil erosion or the loss of topsoil?

The proposed project would result in a less than significant impact to geology and soils with regard to resulting in substantial soil erosion or the loss of topsoil. Construction of the proposed perimeter improvement would require excavation of up to 15 feet of soil materials, which would require temporary or permanent soil displacements ad would leave soils vulnerable to wind and water erosion. The study area is currently highly developed and covered with impervious surfaces. While excavation, grading, or transportation of soils from the study area would remove or displace topsoil, these activities would not remove any soils currently used for agricultural or biological purposes.

While soils during construction would be vulnerable to wind and water erosion, the construction contractor would be required to incorporate stormwater BMPs consistent with the *California Storm Water Best Management Practice Handbooks: Construction*. This would reduce the potential for soil loss during construction. Once construction is completed, soils within the study area would covered with impervious surfaces and would no longer be vulnerable to wind or surface water erosion. Therefore, the proposed project would result in a less than significant impact to geology and soils in relation to soil erosion or the loss of topsoil. The consideration of mitigation measures is not required.

(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The proposed project would result in a less than significant impact to geology and soils in relation to being located on a geologic unit or soil that is unstable or that would become unstable as a result of the project. The project study area does not occur within an unstable geologic unit. As identified in Section 3.8.2, the study area has a low potential for subsidence, landslides, and liquefaction. Geotechnical investigations of the study area have found that the soils currently underlying the proposed structures

[27] Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*.

are not in the loose to medium-dense category, and are not prone to seismic settlement or differential compaction. The proposed project is not anticipated to result in decreased soil stability underlying the site, and would not increase the potential for on- or off-site landslide, liquefaction, or subsidence related events. Therefore, the proposed project would result in a less than significant impact from unstable fill soils. The consideration of mitigation measures is not required.

(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The proposed project would result in a less than significant impact to geology and soils in relation to being located on an expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. Based on the type of soils identified in the project study area, expansive soils are not expected to be a concern.[28] The soils and groundwater underlying the study area are classified as severely corrosive to buried metal pipes and have high soluble sulfate content. The proposed project and constructed features are not anticipated to increase the corrosivity of soils underlying the study area. Therefore, the proposed project would result in a less than significant impact in relation to being located on an expansive and corrosive soils. The consideration of mitigation measures is not required.

(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed project would result in no impact to geology and soils in relation to having soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water. The proposed project's sanitary sewer flows will be connected to municipal sewer systems and no septic tanks or alternative wastewater disposal systems are proposed. Therefore, there would be no impact. The consideration of mitigation measures is not required.

[28] Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*.

3.8.4 Cumulative Impacts

(a)(i) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

The proposed project, once constructed, would not alter the land use or associated hazards as they relate to geology and soils. The area would contain similar structures (paved sidewalks and vehicular right-of-way) that would be used for similar purposes (pedestrian, bicycle, and vehicular transport). Implementation of the proposed project or the alternatives would not result in an increased cumulative impact related to surface fault ruptures, when analyzed with existing infrastructure and reasonably foreseeable development within cumulative impacts analysis area. Mitigation measures would not be required.

(a)(ii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The proposed project, once constructed, would not alter the land use or associated hazards as they relate to geology and soils. The area would contain similar structures (paved sidewalks and vehicular right-of-way) that would be used for similar purposes (pedestrian, bicycle, and vehicular transport). Implementation of the proposed project or the alternatives would not result in an increased cumulative impact related to strong seismic ground shaking, when analyzed with existing infrastructure and reasonably foreseeable development within cumulative impacts analysis area. Mitigation measures would not be required.

(a)(iii) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

The proposed project, once constructed, would not alter the land use or associated hazards as they relate to geology and soils. The area would contain similar structures (paved sidewalks and vehicular right-of-way) that would be used for similar purposes (pedestrian, bicycle, and vehicular transport). Implementation of the proposed project or the alternatives would not result in an increased cumulative impact related to seismic-related ground failure, when analyzed with existing infrastructure and reasonably foreseeable development within cumulative impacts analysis area. Mitigation measures would not be required.

(a)(iv) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

The proposed project, once constructed, would not alter the land use or associated hazards as they relate to geology and soils. The area would contain similar structures (paved sidewalks and vehicular right-of-way) that would be used for similar purposes (pedestrian, bicycle, and vehicular transport).

Implementation of the proposed project or the alternatives would not result in an increased cumulative impact related to landslides, when analyzed with existing infrastructure and reasonably foreseeable development within cumulative impacts analysis area. Mitigation measures would not be required.

(b) Result in substantial soil erosion or the loss of topsoil?

The proposed project, once constructed, would not alter the land use or associated hazards as they relate to geology and soils. The area would contain similar structures (paved sidewalks and vehicular right-of-way) that would be used for similar purposes (pedestrian, bicycle, and vehicular transport). Implementation of the proposed project or the alternatives would not result in an increased cumulative impact related to soil erosion and topsoil loss, when analyzed with existing infrastructure and reasonably foreseeable development within cumulative impacts analysis area. Mitigation measures would not be required.

(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The proposed project, once constructed, would not alter the land use or associated hazards as they relate to geology and soils. The area would contain similar structures (paved sidewalks and vehicular right-of-way) that would be used for similar purposes (pedestrian, bicycle, and vehicular transport). Implementation of the proposed project or the alternatives would not result in an increased cumulative impact related to unstable geology and soils when analyzed with existing infrastructure and reasonably foreseeable development within cumulative impacts analysis area. Mitigation measures would not be required.

(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The proposed project, once constructed, would not alter the land use or associated hazards as they relate to geology and soils. The area would contain similar structures (paved sidewalks and vehicular right-of-way) that would be used for similar purposes (pedestrian, bicycle, and vehicular transport). Implementation of the proposed project or the alternatives would not result in an increased cumulative impact related to expansive or corrosive soils, when analyzed with existing infrastructure and reasonably foreseeable development within cumulative impacts analysis area. Mitigation measures would not be required.

(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The proposed project, once constructed, would not alter the land use or associated hazards as they relate to geology and soils. The area would contain similar structures (paved sidewalks and vehicular right-of-way) that would be used for similar purposes (pedestrian, bicycle, and vehicular transport).

Implementation of the proposed project or the alternatives would not result in an increased cumulative impact related to septic and wastewater management, when analyzed with existing infrastructure and reasonably foreseeable development within cumulative impacts analysis area. Mitigation measures would not be required.

3.8.5 Mitigation Measures

No mitigation would be required.

3.8.6 Level of Significance after Mitigation

Impacts would be less than significant.

3.9 Hazards and Hazardous Materials

This section of the Environmental Impact Report (EIR) analyzes potential impacts to hazards and hazardous materials from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The analysis of hazards and hazardous materials consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project study area, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation. The potential hazards and hazardous materials that could be associated with the proposed project site were evaluated with regard to the Hazardous Waste Initial Site Assessment prepared by Kleinfelder in June 2017 (Appendix F to the Draft EIR), an environmental regulatory database compilation,[1] and a review of published and unpublished literature.

3.9.1 Regulatory Setting

Federal

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, also known as the Superfund, outlines the potential liability related to the cleanup of hazardous substances, available defenses to such liability, appropriate inquiry into site status under Superfund, which is the federal government's program to clean up the nation's uncontrolled hazardous waste sites, statutory definitions of hazardous substances and petroleum products, and the petroleum product exclusion under CERCLA.[2]

Superfund Amendment and Reauthorization Act, Title III

The Superfund Amendment and Reauthorization Act (SARA), Title III of 1986 is the Emergency Planning and Community Right-to-Know Act.[3] Facilities are required to report the following items on U.S. Environmental Protection Agency (EPA) Form R, the Toxic Chemical Release Inventory Reporting Form: facility identification, off-site locations where toxic chemicals are transferred in wastes, chemical-specific information, and supplemental information.

Form R requires a facility to list the hazardous substances that are handled on-site and to account for the total aggregate releases of listed toxic chemicals for the calendar year. Releases to the environment

[1] Environmental Data Resources, Inc. January 28, 2016. The EDR Radius Map Report. 800 North Alameda Street, Los Angeles, CA 90012. Inquiry Number 4524501.2s.

[2] United States Code, Title 42, Chapter 103, Subchapter I: Hazardous Substances Releases, Liability, Compensation. Available at: http://www.law.cornell.edu/uscode/html/uscode42/usc_sup_01_42_10_103.html

[3] United States Code, Title 42, Chapter 116 et seq.: Emergency Planning and Community Right-to-Know Act. Available at: http://www.law.cornell.edu/uscode/html/uscode42/usc_sup_01_42_10_116.html

include emissions to the air, discharges to surface water, and on-site releases to land and underground injection wells.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 was the first major federal act regulating the potential health and environmental problems associated with hazardous and non-hazardous solid waste.[4] RCRA and the implementation regulations developed by the EPA provide the general framework for the national hazardous and non-hazardous waste management systems. This framework includes the determination of whether hazardous wastes are being generated, techniques for tracking wastes to eventual disposal, and the design and permitting of hazardous waste management facilities.

RCRA amendments enacted in 1984 and 1986 began the process of eliminating land disposal as the principal hazardous waste disposal method. Hazardous waste regulations promulgated in 1991 address site selection, design, construction, operation, monitoring, corrective action, and closure of disposal facilities. Additional regulations addressing solid waste issues are contained in 40 Code of Federal Regulations, Part 258.

State

Hazardous Waste Control Law of 1972

The Hazardous Waste Control Law of 1972 is the original hazardous waste control law in California. This law initiated programs that track hazardous waste generators, their hazardous waste streams, and their hazardous waste handling practices.

Title 22 and Title 23 of the California Code of Regulations

In California, Titles 22 and 23 of the California Code of Regulations address hazardous materials and wastes. Title 22 defines, categorizes, and lists hazardous materials and wastes. Title 23 identifies public health and safety issues related to hazardous materials and wastes, and specifies disposal options.

Hazardous Materials Release Response Plans and Inventory Law of 1986

The Hazardous Materials Release Response Plans and Inventory Law of 1986 (Business Plan Act)[5] governs hazardous materials handling, reporting requirements, and local agency surveillance programs.

[4] United States Code, Title 42, Chapter 82, Subchapter I, §§ 6901 et seq.: Solid Waste Disposal Act, Resource Conservation and Recovery Act of 1986. Available at: http://www.law.cornell.edu/uscode/html/uscode42/usc_sup_01_42_10_82.html

[5] California Health and Safety Code, Chapter 6.8, §25500 et seq. (1985, as amended). Available at: http://www.aroundthecapitol.com/code/code.html?sec=hsc&codesection=25404-25404.9

Hazardous Substances Account Act (State Superfund)

Chapter 6.8 of the California Health and Safety Code requires the California Department of Toxic Substances Control (DTSC) to include "the largest manageable number" of potentially responsible parties (PRP) in any cleanup order that applies to a multiple PRP site after considering certain factors, including the adequacy of the evidence of each PRP's liability, the financial viability of each PRP, and the degree to which each PRP contributed to the release of hazardous substances at the site.

Local

City of Los Angeles General Plan

The proposed project site is located within the City of Los Angeles and subject to the goals, objectives, policies, and programs of the City of Los Angeles General Plan. The Safety Element of the City's General Plan contains relevant goals and policies to hazards and hazardous materials. The Safety Element of the City General Plan has established the following goals, objectives, and policies relevant to hazards:[6]

- **Goal 1: Hazard Mitigation.** A city where potential injury, loss of life, property damage, and disruption of the social and economic life of the City due to fire, water related hazard, seismic event, geologic conditions or release of hazardous materials disasters is minimized.
  - **Objective 1.1:** Implement comprehensive hazard mitigation plans and programs that are integrated with each other and with the City's comprehensive emergency response and recovery plans and programs.
    - **Policy 1.1.4:** Health/environmental protection. Protect the public and workers from the release of hazardous materials and protect City water supplies and resources from contamination resulting from accidental release or intrusion resulting from a disaster event, including protection of the environment and public from potential health and safety hazards associated with program implementation. (All Emergency Operations Organization [EOO] hazardous materials and water pollution mitigation programs implement this policy.)

Alameda District Specific Plan

Phase I and Phase II of the Alameda District Specific Plan provide guidance related to contaminated groundwater and soil that are relevant to the consideration of the proposed project: [7]

[6] City of Los Angeles Department of City Planning. November 1996. *Safety Element of the Los Angeles City General Plan*. Available at: http://cityplanning.lacity.org/cwd/gnlpln/saftyelt.pdf

[7] City of Los Angeles Department of City Planning. Effective June 18, 1996. *Alameda District Specific Plan.* A part of the City General Plan. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF

- Soil remediation programs shall be designed to minimize the release of contaminants.
- During excavation and construction, contaminated soil and groundwater may require on-site remediation and/or removal and disposal. Any necessary treatment or disposal of contaminated soil and groundwater will be conducted in accordance with applicable regulatory requirements. Appropriate permits will be obtained to conduct necessary treatment and disposal, including a National Pollutant Discharge Elimination System (NPDES) permit from the Los Angeles Regional Water Quality Control Board for the disposal of remediated groundwater in the local storm drain system. Disposal of contaminated soil will take place at facilities specifically authorized to accept such materials.
- If contaminated groundwater or soil is encountered during construction, such contaminated groundwater or soil shall be handled in a manner satisfactory to all public agencies with jurisdiction over such matters.
- The project site shall be properly secured to prevent access by the general public, thereby minimizing the possibility of exposure to contaminated groundwater.
- A Remediation Action Plan (RAP) will be developed and implemented for the remediation of the contaminated soil and groundwater at the Terminal Annex.

3.9.2 Affected Environment/Existing Conditions

The characterization of existing conditions summarizes data obtained through five general sources:

- Review of previously prepared reports that address all or portions of the study area or immediately adjacent areas
- Update of government data bases listing known hazardous material sites
- Evaluation of pertinent records for evidence of historical and current use of the project site and adjacent properties
- Reconnaissance-level inspection of accessible portions of the proposed project site and accessible adjacent areas within approximately 1,000 feet
- Interviews with local government officials

The characterization of the existing conditions for hazards and hazardous materials is based on three previously-prepared Site Assessments that include the project site and a project-specific report prepared to support this EIR: (1) Initial Site Assessment, Los Angeles County Metro Southern California Regional Interconnector Project (SCRIP) Segments 1,3, 4, and 5, Los Angeles, California;[8] (2) Phase I Environmental Site Assessment (ESA) and Limited Phase II Testing Selection Portions of the Los Angeles Union Station Property, Los Angeles California;[9] (3) the Phase I ESA for the Link Union Station Project

[8] Kleinfelder. December 10, 2014. *Draft Initial Site Assessment, Los Angeles County Metro Southern California Regional Interconnector Project (SCRIP) Segments 1, 3, 4, and 5, Los Angeles, California*. Prepared for HDR Engineering Inc., 3230 El Camino Real, Suite 200, Irvine, CA 92602-1377

[9] URS Corporation Americas. January 4, 2011. Phase I Environmental Site Assessment and Limited Phase II Testing Selection Portions of the Los Angeles Union Station Property, Los Angeles California. Prepared for TPG Capital, L.P., c/o Paul, Hasitngs,

Area;[10] and (4) the Hazardous Waste Initial Site Assessment (Appendix F to the Draft EIR). The prior Site Assessments were conducted in general accordance with the American Society for Testing and Materials (ASTM) Standard Practices for Phase I Environmental Site Assessments, either E1527-13 or E 1527-05, depending on the date performed. As specified by the ASTM standards, the information contained in the prior Site Assessments have been updated with an Environmental Data Resources (EDR) government records search, as found in the Hazardous Waste Initial Site Assessment (Appendix F) (see Table 3.9.2-1, *Properties with Potential Hazardous Waste Concerns*).

A variety of office and government buildings, parking lots, apartments, a gasoline station, a museum, a Masonic Hall, and a number of specialty and souvenir shops, restaurants, museums, offices, a church and parks associated with El Pueblo De Los Angeles Historic Monument are located along Alameda Street and in the vicinity of the project study area between SR-101 and East Cesar E Chavez Avenue.

Janofsy & Walker, L.L.P. 875 15th Street, N.W., Washington D.C 20005.

[10] HDR Engineering, Inc., October 26, 2016, Phase I Environmental Site Assessment Link Union Station Project Area.

TABLE 3.9.2-1
PROPERTIES WITH POTENTIAL HAZARDOUS WASTE CONCERNS

EDR ID No.	Business Name	Street Address	Location Relative to Project Area	Listing(s) Summary and Property Status
1	Metropolitan Water District	800 North Alameda St.	LAUS Property	Listed in the Facility and Manifest Data (HAZNET) database, which includes data extracted from hazardous waste manifests received each year by the California Department of Toxic Substances Control (DTSC), for having disposed of asbestos-containing waste to an off-site landfill, and empty containers (greater than 30 gallons) to a recycling facility in 1996.
2	Los Angeles Union Passenger TE	800 North Alameda St.	LAUS Property	Listed in the Historical Underground Storage Tank (HIST UST) database for having had three USTs, including a 1,000-gallon "product" UST installed in 1983, and two 12,750-gallon "product" USTs installed in 1939.
3	National Railroad Passenger Corp	800 North Alameda St.	LAUS Property	Listed in the HAZNET database as having disposed of "unspecified aqueous solution" in 2003, "other organic solids" in 2005, and "unspecified oil-containing waste" and "other inorganic solid waste" in 2014.
4	Los Angeles Union Station	800 North Alameda St.	LAUS Property	Listed in the Facility Index System/Facility Registry System (FINDS), which is a database of facility information and "pointers" to other sources that contain more details. The facility was indicated to be listed in the RCRA program, and U.S. EPA Enforcement and Compliance History Online (ECHO) database.
5	Amtrak	800 North Alameda St.	LAUS Property	Listed in the HAZNET database as having disposed of "unspecified aqueous solution" waste in 2000.
6	No Name Listed	800 North Alameda St.	LAUS Property	A release was reported based on an Emergency Response Notification System (ERNS) listing for this address. However, detailed information was not provided.
7	Catellus Development Corp	800 North Alameda St.	LAUS Property	Listed in the HAZNET database as having disposed of asbestos-containing waste in 1994 and 1995, "organic solids with halogens" in 1995, and "other inorganic solid waste" in 1998. The facility was also listed in the National Pollutant Discharge Elimination System (NPDES) in 2015 in the "No Exposure Certification" program under the facility National Railroad Passenger Corp. A listing in the NPDES database is typically associated with permitted discharge to the storm water system.
8	Los Angeles Union Station	800 North Alameda St.	LAUS Property	Listed in the California Hazardous Material Incident Report System (CHMIRS) database for an incident that occurred on June 9, 2011, associated with a passenger who died from an unknown cause while boarding a train.
9	Southern California Regional Rail Authority Metro	800 North Alameda St.	LAUS Property	Listed in the HAZNET database as having disposed of waste (type not reported) in 2012.
10	Los Angeles Union Terminal	800 North Alameda St.	LAUS Property	Listed in the CHMIRS database due to an incident involving a commuter who fell and hurt herself in 2005 while preparing to board a train.
11	LA UPT Union Station	800 North Alameda St.	LAUS Property	Listed in the CHMIRS database for an incident that occurred in 1995 involving a spill of approximately 25 gallons of diesel from a broken fuel filter on a train.
12	Los Angeles Passenger Terminal	800 North Alameda St.	LAUS Property	Listed in the HIST UST database for having had a 1,000 gallon "waste" UST (PT-4) and two 12,750-gallon diesel USTs (T-1 and T-2).
13	Union Station	800 North Alameda St.	LAUS Property	Listed in the Superfund Enterprise Management System (SEMS)-Archive database (formerly the CERCLIS-No Further Remedial Action Planned [NFRAP] database), which tracks sites that have no further interest under the U.S. EPA Superfund Program. The facility was listed as having had a Preliminary Assessment performed in July 1992, and based on the results was not indicated to qualify for the National Priorities List (NPL).
14	No Name	800 North Alameda St.	LAUS Property	Listed in the ERNS database, but detailed information was not provided.
15	National Railroad Passenger Corp	800 North Alameda St.	LAUS Property	Listed in the NPDES database effective 1998, but the permit was indicated to have been terminated in 2014.
16	No Name	800 North Alameda St.	LAUS Property	Listed in the ERNS database, but detailed information was not provided.
17	Los Angeles Train Station	800 North Alameda St.	LAUS Property	Listed in the CHMIRS database associated with an incident that occurred on August 22, 2016, due to the death of a passenger on a train from unknown cause.
18	Los Angeles Union Station Platform 7	800 North Alameda St.	LAUS Property	Listed in the NPDES database as having a permit associated with construction in 2011.
19	L A Union Passenger Terminal	800 North Alameda St.	LAUS Property	Listed in the Los Angeles County Site Mitigation (HMS) database, which is a listing of industrial sites that have had a reported spill or complaint. The issue was not indicated, but was abated on January 1, 2001. Listed in the California Facility Inventory Database (CA FID), which contains a historical listing of active and inactive UST locations; the HIST UST database; and, the Statewide Environmental Evaluation and Planning System (SWEEPS) UST database, which was a listing of UST locations maintained by the California State Water Resources Control Board (SWRCB) in the early 1990s, but is no longer updated. The facility reportedly had a 1,000-gallon gasoline UST and two 12,750-gallon "chemical" USTs. The facility is also listed in the Waste Discharge Elimination System (WDS) associated with storm water runoff, and in the Emissions Inventory (EMI) database for having emitted hazardous air pollutants (nitrogen oxides and particulate matter) in 1987.
20	No Name	800 North Alameda St.	LAUS Property	Listed in the ERNS database, but detailed information was not provided.
21	Los Angeles Union Station		LAUS Property	Listed as a large quantity generator (LQG) of hazardous waste, including ignitable waste and lead, in 2014. No violations were reported.
22	Amtrak		LAUS Property	Listed in the HAZNET database for having disposed of "unspecified aqueous solution" waste in 1998.
23	Lee Hong	714 North Alameda St.	Adjoins east	Listed in the EDR HIST Auto Stations (HIST Auto) database as an automobile repair facility in 1937.

TABLE 3.9.2-1
PROPERTIES WITH POTENTIAL HAZARDOUS WASTE CONCERNS

EDR ID No.	Business Name	Street Address	Location Relative to Project Area	Listing(s) Summary and Property Status
24	Mun Sam	719 North Alameda St.	Adjoins west	Listed in the EDR historical cleaners (HIST Cleaners) database as a clothes pressers, cleaners and/or repairer in 1929 and 1933.
25	Metro Rail	Union Station	LAUS Property	Closed Spills, Leaks, Incidents, and Complaints (SLIC) case (Case No. 0311) as of August 16, 1996 associated with a release of petroleum hydrocarbons. SWRCB GeoTracker™ summary information for a "Metro Rail" site (Case No. 0311) at Union Station indicates that TPH-impacted soil (up to 4,000 parts per million [ppm]) was reused on the property. The location of soil reuse was not available in the records reviewed. The case was closed as of August 16, 1996.
26	L A Union Passenger Terminal	726 North Alameda St.	Adjoins east	Listed in the CA FID UST database as an active facility. Listed in the SWEEPS database, but detailed information regarding the USTs was not provided.
27	Pacific Coast Service	701 North Alameda St.	Adjoins west	Listed in the HIST Auto database as a gasoline and oil service station in 1933.
28	Romero Juventino	105 Arcadia Way	Adjoins Arcadia Way	Listed in the HIST Cleaners database as a clothes presser, cleaner and/or repair facility in 1929.
29	Velasco Florenzo	107 Arcadia Way	Adjoins Arcadia Way	Listed in the HIST Cleaners database as a clothes presser and cleaner facility in 1933.
30	Mun Sam	518 North Los Angeles St.	Adjoins at Los Angeles Street	Listed in the HIST Cleaners database as an Oriental laundry facility in the 1942.
31	Ketcha J L	431 North Main St.	Indicated to be in the City of Watts.	Listed in the HIST Auto database as an automobile repair and service station in 1928.
32	UNG Henry	426 North Los Angeles St.	Adjoins Arcadia Street	Listed in the HIST Auto database as a gasoline and oil service station in 1933 and 1937.
37	Chevron Station No. 9-8815	901 North Alameda St.	Adjoins northwest	Listed in the LUST database as having had a release of gasoline that affected soil. Remediation was performed and the case was closed as of September 7, 2011.
38	Chevron Station # 9-8815	901 North Alameda St.	Adjoins northwest	Listed in the UST database, but detailed information was not provided.
39	Joe Bezerra Chevron	901 North Alameda St.	Adjoins northwest	Listed in the HIST UST database as having had a 1,000-gallon waste oil UST, 250-gallon "product" UST, and two 10,000-gallon "product" USTs. Listed in the SWEEPS database as having had three 10,000-gallon gasoline USTs.
40	Hawk II Environmental Corp	901 North Alameda St.	Adjoins northwest	Listed in the HIST Auto database as a Chevron gasoline service station between 1994 and 2010.
49	Metropolitan Water District	700 North Alameda St.	Adjoins east	Listed in the FINDS and UST databases. Detailed information was not provided.
61	Terminal Annex	900 North Alameda St.	Adjoins northeast	Listed in the HIST UST database as having had nine USTs, including: a 55-gallon "product" UST, 20,000-gallon diesel UST, 600-gallon waste oil UST, two 600-gallon "product" USTs, 10,000-gallon diesel UST, 5,000-gallon gasoline UST, and two 10,000-gallon gasoline USTs.
62	U S Post Office	900 North Alameda St.	Adjoins northeast	Listed in the CA FID UST database as an inactive UST facility location. Listed in the SWEEPS database, but detailed information regarding the USTs was not provided.
63	USPS	900 North Alameda St.	Adjoins northeast	Listed in the FINDS, ECHO and RCRA Non-Gen databases. The facility does not presently generate hazardous waste.
64	U.S. Postal Service Terminal Annex	900 North Alameda St.	Adjoins northeast	Listed in the Leaking Underground Storage Tank (LUST) database associated with a release of diesel that affected groundwater. The case was reported closed as of November 12, 1999.
66	Coresite	900 North Alameda St.	Adjoins northeast	Listed in the aboveground storage tank (AST) database, but detailed information was not provided.
66	Verizon Global Networks Inc.	900 North Alameda St.	Adjoins northeast	Listed in the AST database, but detailed information was not provided.
97	LA to Pasadena Metro Blue Line Construction Author	Platforms at Union Station	LAUS Property	Listed in the SLIC database. Detailed information was not provided, but the case was indicated to have been closed as of March 7, 2012.
114	LA Co Parking Garage	1035 North Alameda St.	550 feet north	Listed in the LUST and HIST Cortese databases due to a release of gasoline that affected groundwater. The case was reported closed as of January 22, 1998.
121, 122, 123, 124	LA Fire Station 4; Los Angeles Fire Station 4; LA City Fire Station #4; Fire Station 4	800 North Main St.	950 feet northeast	Listed in the FINDS, RCRA-LQG, HIST UST, CA FID UST, and SWEEPS UST databases. The facility was indicated to have had a 1,000-gallon diesel UST. A release that affected soil was reported, but the case was reported closed as of February 18, 2009.
133, 134, 135	M P R Fleet Svcs Inc.; Alameda Street Garage; LA County Parking Services	1055 North Alameda St.	950 feet north	Facilities at this address were listed in the RCRA-SQG, FINDS, ECHO, HAZNET, Los Angeles County HMS, UST, and SWEEPS databases. USTs were reportedly maintained at this location including a 1,000-gallon waste oil UST, 2,000-gallon diesel UST, 7,500-gallon gasoline UST, and 10,000-gallon gasoline UST. No releases or violations were reported.

TABLE 3.9.2-1
PROPERTIES WITH POTENTIAL HAZARDOUS WASTE CONCERNS

EDR ID No.	Business Name	Street Address	Location Relative to Project Area	Listing(s) Summary and Property Status
146, 147	Magnus Company, Inc.; Magnus Co. Inc.	860 North Main St.	1,000 feet north-northeast	Listed in the DTSC EnviroStor database with a status of "No Further Action" as of 1984. The facility was identified as a former metal manufacturing facility. Discovery was performed in June 1981 and a Preliminary Assessment completed in September 1984. No contaminants were found at this facility location. The case was archived.
158	The California Endowment Terminal	1000 North Alameda St.	350 feet northeast	Listed in the LUST database due to a release of diesel that affected soil. The case was closed as of September 30, 2008.
162, 163, 164	Mobil #11-H41 (Former); Mobile Oil Corp;	774 North Broadway	1,300 feet northwest	The facility was listed in the HIST UST database has having maintained a 6,000-gallon gasoline UST, 8,000-gallon gasoline UST, 10,000-gallon gasoline UST, and a 280-gallon waste oil UST. Listed in the LUST database due to a release of gasoline that affected groundwater. The case was closed as of September 26, 1996. Listed in the SLIC database with a "No Further Action" status.
183	Mobil #11-HPB (Former)	706 Sunset Boulevard West	700 feet north	Listed in the LUST database due to a release of gasoline that affected groundwater. The case was closed as of October 23, 1996.
186, 187	International Bank Property	943 North Main St.	1,800 feet north	Listed in the SLIC database with a "No Further Action" status as of September 26, 1997.
188	Elias Y Zawaheri	766 North Hill St.	1,600 feet northwest	Listed in the CA FID UST, SWEEPS UST, HIST Cortese, and LUST databases. The facility had a reported release of gasoline that affected groundwater. The case was closed as of December 2, 1991.
190	Fueling Station Former	1135 North Alameda St.	1,600 feet north-northeast	Listed in the LUST database due to a release of gasoline that affected soil. The case was closed as of February 12, 2016.

Routine Transport, Use, or Disposal of Hazardous Materials

LAUS is the main railway station in Los Angeles County, serving an estimated 110,000 passengers per day. A variety of long distance and local transit service originate, terminate, or pass through the station, including Amtrak, Metrolink, Metro Rail subway and light rail transit lines, and dozens of bus lines, including both those operated by Metro and municipalities. Many of these services rely on diesel fuels to power the vehicles. Two rules, Clean Air Nonroad Diesel Rule (65 Federal Register [FR] 6698) and the Locomotive and Commercial Marine Rule (66 FR 5002), took effect in in 2008 and 2009, respectively. These standards are based on the use of advanced exhaust emission control devices to reduce diesel emissions. The use, transport, and disposal of hazardous materials would be comparable to other the commercial, retail, residential, industrial, and manufacturing land uses within and adjacent to LAUS, such as cleaning supplies, fuels, herbicides, and pesticides. The transport, use, and storage of hazardous materials are governed by a range of federal, state, and local statutes and regulations.

Freight trains or bulk materials that can contain hazardous materials are conveyed via the Burlington Northern Santa Fe (BNSF) main line corridor, which is a minimum of a quarter mile away from the passenger rails and platforms within LAUS.

Hazardous Materials in the Environment

The project study area is located within an area that was used for commercial, industrial, and residential purposes since the late 1800s. The project study area is adjacent to commercial and industrial areas. Properties west of Alameda Street were generally developed with boarding rooms/shops associated with China Town and winery structures since at least the early 1900s. A gasoline station occupied the property at the southwest corner of Alameda Street/Cesar Chavez between at least 1925 and 1965. The winery was no longer in operation by the mid-1960s and the structure uses were changed and incorporated as part of El Pueblo de Los Angeles Historical Monument. Properties east of Alameda Street were generally developed since at least the late 1880s. Various uses until the early 1950s have included a hotel, boarding houses, warehousing, automobile repair, winery, a fruit company, well and water pipe manufacturer, and numerous shops and boarding rooms associated with Chinese Quarters. By 1953, structures had been demolished and the property was associated with LAUS to the east. The potential exists for subsurface impacts to be present as a result of the former gasoline station, which occupied the property at the southwest corner of Alameda Street and Cesar Chavez.

Railroad tracks were present along the center of Alameda Street since at least 1888 through 1970. Railroad track spurs were present branching from Alameda Street onto properties to the east. Several spur tracks were apparent on the northern portion of the LAUS Forecourt parking area between at least 1920 and 1938. Portions of the tracks may remain beneath pavement or may have been removed. The potential presence of hydrocarbons, metals and persistent pesticides in soil along or adjacent to the railroad track alignment represents a potential environmental concern to the Project.

Elevated concentrations of lead (from use of leaded gasoline) and other metals are sometimes associated with older roadways. Based on a review of historical sources, Alameda Street, North Los Angeles Street, and Cesar Chavez (formerly Macy Street) have been present since at least 1888. Arcadia Street has been present since the mid-1950s. The areas along these roadways appear to have been paved (e.g., sidewalks or pavement associated with developed adjoining properties) since the advent of wide leaded gas distribution. However, the potential exists for aerially deposited lead (ADL) to be present in shallow soil in unpaved areas along these roadways, or beneath existing pavement that may cover formerly exposed areas along these roadways, that were not observed during review of historical sources.

Existing or Proposed Schools

There are two schools located near the project study area (Figure 3.9.2-1, *Educational Facilities within One-Half Mile of Project Study Area*). Chinatown Teen Post provides guidance and tutoring programs (not K–12) and is located at 600 N Broadway. One pre-K educational facility, La Petite Academy, an early childhood and education center (not K–12), is located adjacent to the southwestern corner of the project study area at 750 North Alameda Street.

Hazardous Materials Sites Pursuant to Government Code Section 65962.5

The review of the California Department of Toxic Substances Control (DTSC) environmental regulatory database compilation does not indicate that the project site is included on a list of hazardous materials sites compiled pursuant to the Government Code Section 65962.5.[11] However, the EDR report identifies sites at LAUS that are associated with rail and bus operations.[12] A total of 63 hazardous materials sites are located within one-quarter mile of the project site (Table 3.9.2-1, *Properties with Potential Hazardous Waste Concerns*). Given the long history of urban, transportation, and industrial uses, there is a potential for hazardous materials to be present in the underlying soils at the project site.

Location within an Airport Land Use Plan, within Two Miles of a Public Airport or Public Use Airport

There are no public airports or public use airports within two miles of the project study area (Figure 3.9.2-2, *Airports*).

Location within the Vicinity of a Private Airstrip

There are no private airports within two miles of the project study area (Figure 3.9.2-2).

[11] Department of Toxic Substance Control (DTSC), Envirostar Database.

[12] Environmental Data Resources, Inc. 28 January 2016. The EDR Radius Map Report. 800 North Alameda Street, Los Angeles, CA 90012. Inquiry Number 4524501.2s.

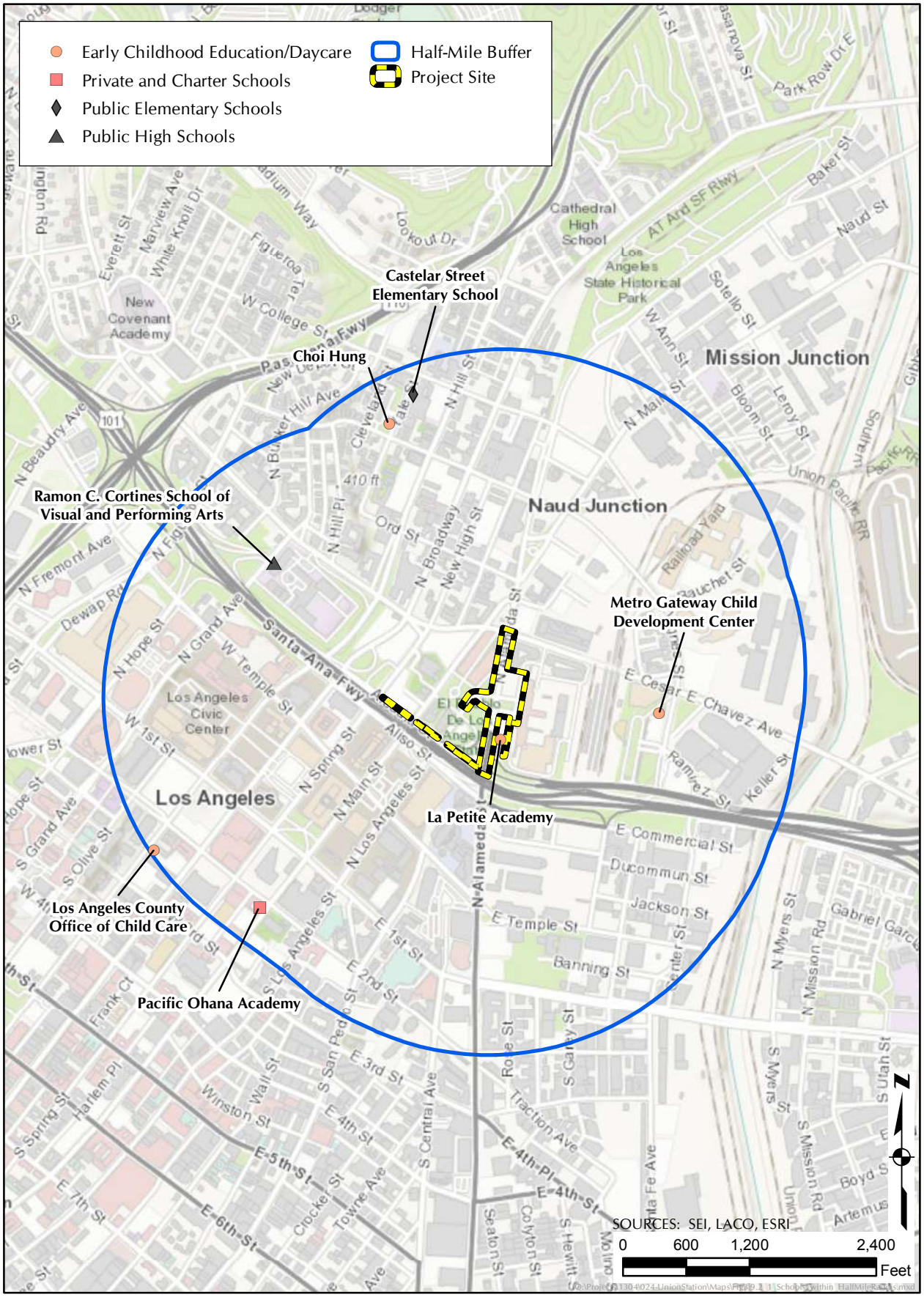


Figure 3.9.2-1. Educational Facilities within One-Half Mile of Project Study Area

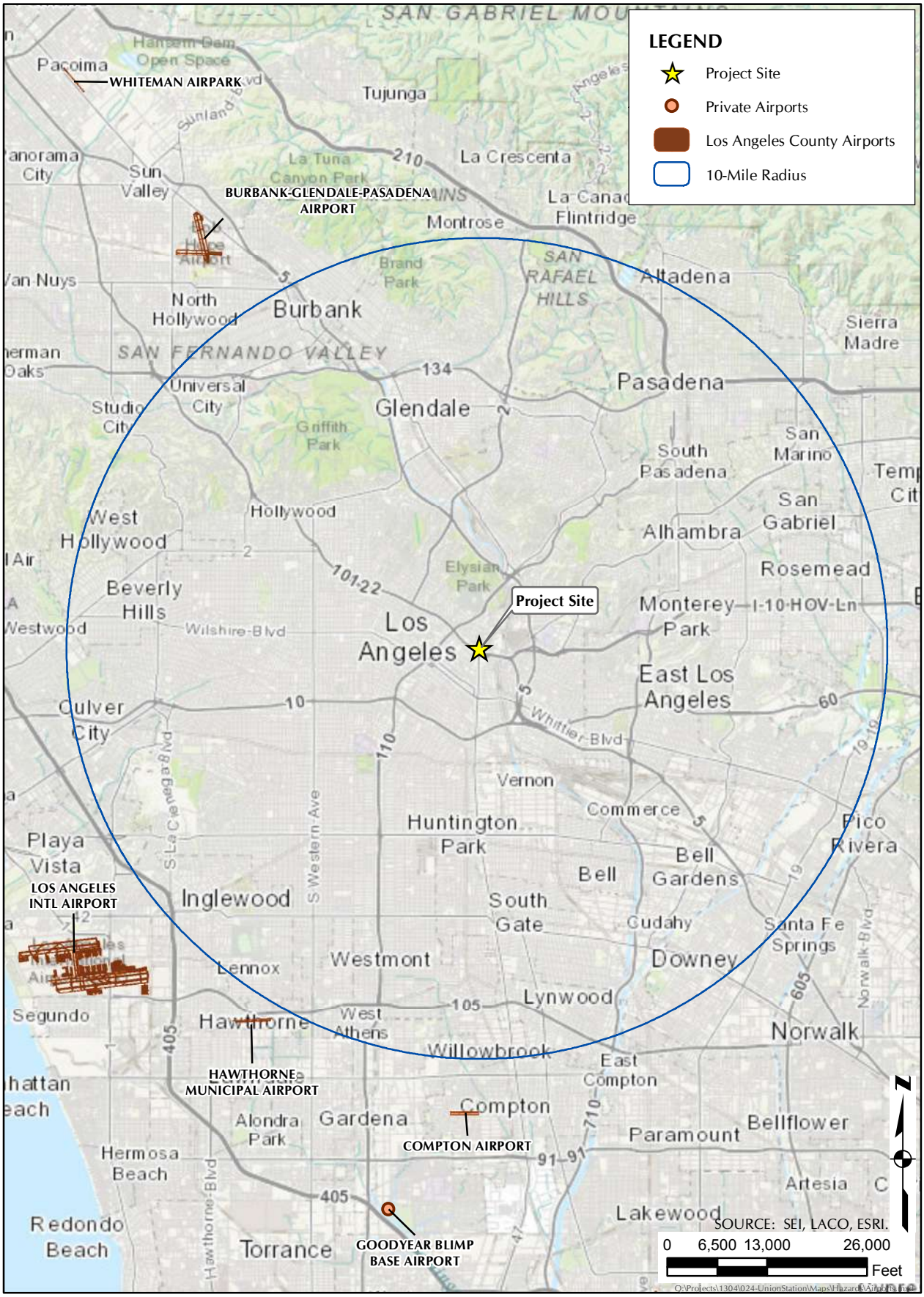


Figure 3.9.2-2. Airports

Emergency Response Plan or Emergency Evacuation Plan

Based on information obtained from the City of Los Angeles Fire Department, the project site is not included in any emergency response plan or any emergency evacuation plan.[13]

Wildland Fires

Based on the review of fire severity hazard zone maps developed by the California Department of Forestry and Fire Protection (CAL FIRE), the project site is not located within a severe fire hazard zone (Figure 3.9.2-3, *Fire Hazard Severity Zones*).[14]

3.9.3 Environmental Impacts/Environmental Consequences

The potential for the proposed project to result in impacts related to hazards and hazardous materials was analyzed in relation to the eight questions contained in Appendix G of the State CEQA guidelines. Would the project:

(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The proposed project would result in less than significant impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The proposed project consists of improvements to facilitate alternative transportation, particularly pedestrians and cyclists, including connections to rail, and bus. The transport, use, and storage of hazardous materials are governed by a range of federal, state, and local statutes and regulations. These improvements would require incidental use of cleaning supplies, fuels, herbicides, and pesticides. Since Metro is a public agency, the use and storage of these materials is regulated by a Business Plan. The purpose of a Business Plan is to prevent or minimize the damage to public health and safety and the environment from a release or threatened release of hazardous materials. It also satisfies community right-to-know laws. This is accomplished by requiring businesses that handle hazardous materials in quantities equal to or greater than 55 gallons of a liquid, 500 pounds of a solid, or 200 cubic feet of compressed gas, or extremely hazardous substances above the threshold planning quantity to (1) inventory their hazardous materials, (2) develop a site map, (3) develop an emergency plan, and (4) implement a training program for employees. Businesses must submit this information electronically to the statewide information management system (California Environmental Reporting System, or CERS). Once the submittal has been made, the local implementing agency (Certified Unified Program Agency or CUPA) will verify the information and provide it to agencies responsible for the protection of public health and safety and the environment. These agencies include

[13] Humphrey, Brian, Los Angeles Fire Department, Public Service Officer. 9 December 2013. Telephone conversation with André Anderson, Sapphos Environmental, Inc., Senior Environmental Compliance Specialist, Pasadena, CA.

[14] State of California Department of Forestry and Fire Protection (CAL FIRE). 2007. Very High Fire Hazard Safety Zone Map, Los Angeles, CA. Sacramento, CA.

Fire Departments, Hazardous Materials Response Teams, or Local Environmental Regulatory. The application of herbicides and pesticides must be performed under the supervision of a licensed applicator, consistent with the specifications if the Materials Data Safety Sheet. Therefore, there would be less than significant impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. No mitigation measures would be required.

(b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Construction

The proposed project has the potential to result in significant Impacts to hazards and hazardous materials during construction in relation to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Although there are no known hazardous materials sites recorded within the project boundary, there are 24 sites listed in association with LAUS, and an additional 39 sites in the other properties located within one-quarter mile of the proposed project site (Table 3.9.2-1). The historic land uses in and adjacent to the proposed project area are also known sources of hazardous materials, including vehicular use of roadways, fuels station, and adjacent rail and bus uses, manufacturing , and industrial land uses. The potential presence of hydrocarbons, metals, and persistent pesticides in soil along or adjacent to former railroad tracks along Alameda Street represent a potential environmental concern. Elevated concentrations of lead (from use of leaded gasoline) and other metals are sometimes associated with older roadways. Based on a review of historical sources, Alameda Street, North Los Angeles Street, and Cesar Chavez (formerly Macy Street) have been present since at least 1888. Arcadia Street has been present since the mid-1950s. The potential exists for subsurface pollutants to be present as a result of a former gasoline station, which occupied the triangular property at the southwest corner of Alameda Street and Cesar Chavez. Even the historic yellow traffic markings (thermoplastic and paint) used to demarcate lanes in the street may potentially contain hazardous levels of lead chromate. There is potential of naturally occurring oil seeps within the project area, or impacted soil from a crude oil pipeline beneath Alameda Street. The potential to encounter contaminated soils during construction and expose workers and the surrounding general public and land uses to such substances constitutes a significant impact warranting the consideration of mitigation measures.

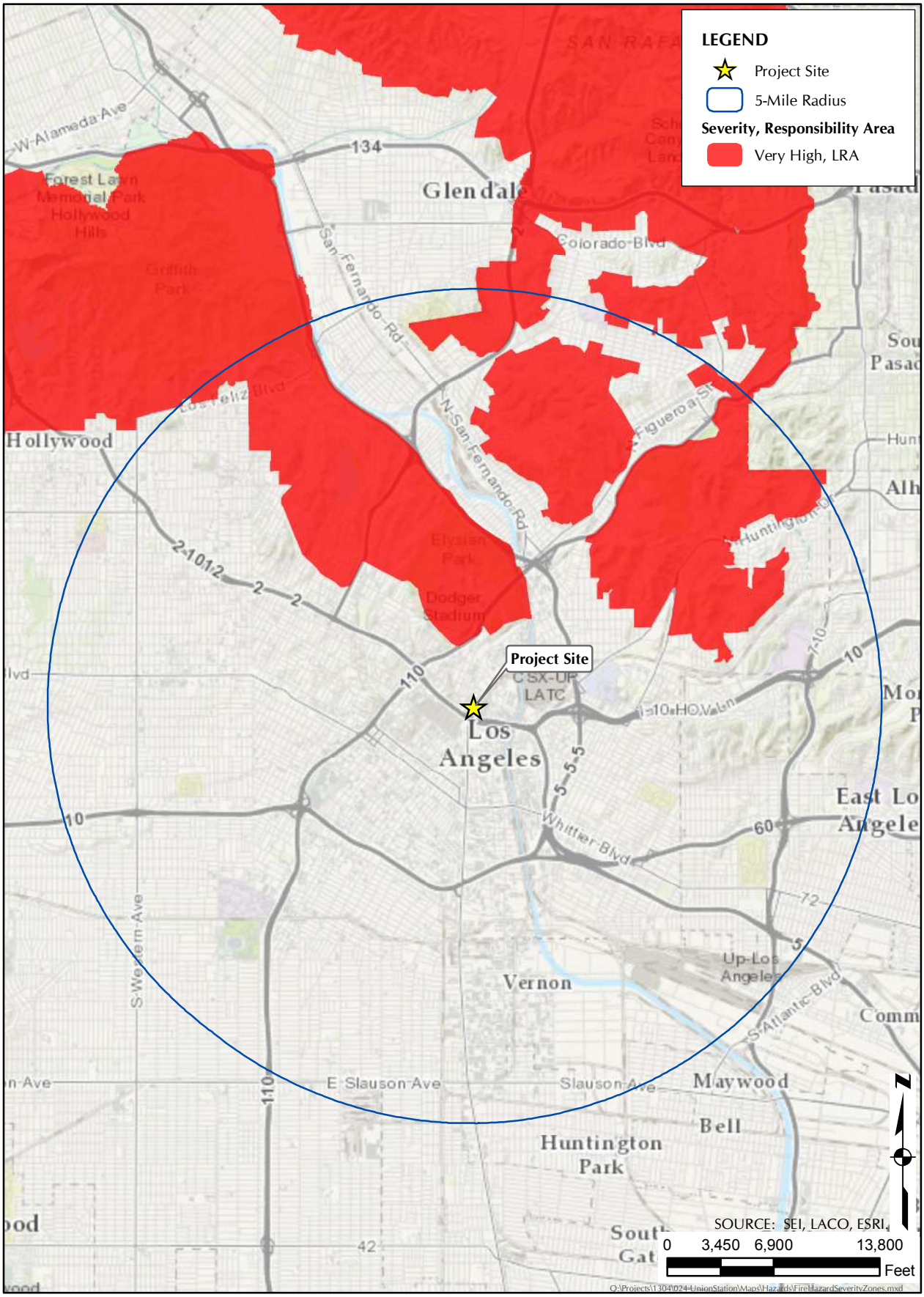


Figure 3.9.2-3. Fire Hazard Severity Zones

Operation

The proposed project consists of improvements to facilitate alternative transportation, particularly pedestrians and cyclists, including connections to rail, and bus. These improvements would require incidental use of cleaning supplies, fuels, herbicides, and pesticides. The transport, use, and storage of hazardous materials are governed by a range of federal, state, and local statutes and regulations. Since Metro is a public agency, the use and storage of these materials is regulated by a Business Plan. The application of herbicides and pesticides must be performed under the supervision of a licensed applicator, consistent with the specifications in the Materials Data Safety Sheet. Therefore, there would less than significant operational impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

(c) Emit hazardous emissions or handles hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction

The construction of the proposed project would have the potential to result in significant impacts to hazards and hazardous materials with respect to the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. There are two existing schools located within one-quarter mile of the project study area. Although there are no known hazardous materials sites recorded within the project boundary, there are 24 sites listed in association with LAUS, and an additional 39 sites in the other properties located within one-quarter mile of the proposed project site (Table 3.9.2-1). The historic land uses in and adjacent to the proposed project area are also known sources of hazardous materials, including vehicular use of roadways, fuels station, and adjacent rail and bus uses, manufacturing, and industrial land uses. The potential presence of hydrocarbons, metals and persistent pesticides in soil along or adjacent to former railroad tracks along Alameda Street represent a potential environmental concern to the Project. Elevated concentrations of lead (from use of leaded gasoline) and other metals are sometimes associated with older roadways. Based on a review of historical sources, Alameda Street, North Los Angeles Street, and Cesar Chavez (formerly Macy Street) have been present since at least 1888. Arcadia Street has been present since the mid-1950s. The potential exists for subsurface pollutants to be present as a result of a former gasoline station, which occupied the triangular property at the southwest corner of Alameda Street and Cesar Chavez. Even the historic yellow traffic markings (thermoplastic and paint) used to demarcate lanes in the street may potentially contain hazardous levels of lead chromate. There is potential of naturally occurring oil seeps within the project area, or impacted soil from a crude oil pipeline beneath Alameda Street. The potential to encounter contaminated soils during construction and schools to the associated airborne emissions constitutes a significant impact warranting the consideration of mitigation measures.

Operation

The proposed project consists of improvements to facilitate alternative transportation, particularly pedestrians and cyclists, including connections to rail, and bus. These improvements would require incidental use of cleaning supplies, fuels, herbicides, and pesticides. The transport, use, and storage of hazardous materials are governed by a range of federal, state, and local statutes and regulations. Since Metro is a public agency the use and storage of these materials is regulated by a Business Plan. The application of herbicides and pesticides must be performed under the supervision of a licensed applicator, consistent with the specifications in the Materials Data Safety Sheet. Therefore, there would be less than significant operational impacts to hazards and hazardous materials related to exposing schools to hazardous emission as a result of operation or maintenance of the proposed improvements.

(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

The proposed project would result in no impacts to hazards and hazardous materials in relation to being located on a site which is included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. The proposed project is not located on a site included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. Therefore there would be no impact, and mitigation measures would not be required.

(e) Be located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, and results in a safety hazard for people residing or working in the project are?

The proposed project would result in no impacts to hazards and hazardous materials in relation to being located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport. No public airports or public use airports are in the project vicinity. Therefore there would be no impact, and mitigation measures would not be required.

(f) Be within the vicinity of a private airstrip, and would result in a safety hazard for people residing or working in the project area?

The proposed project would result in no impacts to hazards and hazardous materials in relation to being located within the vicinity of a private airstrip. No private airstrips are in the project vicinity. Therefore there would be no impact, and mitigation measures would not be required.

(g) Impair implementation of or physically interferes with an adopted emergency response plan or emergency evacuation plan

The proposed project would result in no impacts to hazards and hazardous materials in relation to impairing implementation of or physically interfering with an adopted emergency response plan or

emergency evacuation plan. The project site is not included in any emergency response plan or any emergency evacuation plan. Therefore there would be no impact, and mitigation measures would not be required.

(h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

The proposed project would result in no impacts to hazards and hazardous materials in relation to exposing people or structures to a significant risk or loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. The project site is located in a major metropolitan area, and it is not located within a severe fire hazard zone. Therefore there would be no impact, and mitigation measures would not be required.

3.9.4 Cumulative Impacts

The potential for cumulative impacts was evaluated in relation to each of the eight questions in the State CEQA Guidelines for hazards and hazardous materials that were considered for the proposed project. The proposed project would result in no impact to hazards and hazardous materials in relation to six of the eight questions. In relation to those six questions for which there is no impact, there would be no contribution to cumulative impacts on hazards and hazardous materials resources in the region. The proposed project would have the potential to contribute to cumulative impacts to hazards and hazardous materials in relation to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and in relation to emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. The consideration of mitigation measures is required.

3.9.5 Mitigation Measures

The following mitigation measures would reduce potential impacts to hazards and hazardous materials in relation to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment, and in relation to emitting hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school, to below the level of significance:

> **MM-HAZ-1:** If soil in the vicinity of the former railroad track alignment along Alameda Street and the rail spurs into the Forecourt parking area is planned for excavation and off-site disposal as part of the proposed Project improvements, soil shall be sampled and analyzed for the potential presence of petroleum hydrocarbons, metals and persistent pesticides. The samples should be analyzed for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs),

CCR Title 22 Metals, and organochlorine pesticides (OCPs) using United States EPA Methods 8015B(M), 8260B, 6010B/7471A, and 8081, respectively. This methodology should be documented in a Soil Management Plan prior to construction. During construction, soil excavations conducted on site shall be monitored for visible soil staining and odor. Impacted soils shall be disposed off site in accordance with pertinent local, state, and federal regulatory guidelines.

MM-HAZ-2: If soil in the vicinity of the former gasoline station is planned for excavation and off-site disposal as part of the proposed Project improvements, soil sampling shall be performed along the west side of Alameda Street within the Project area, in the vicinity of the former gasoline station. Soil samples should be analyzed for the presence of TPH, VOCs, and lead using United States S EPA Methods 8015B(M), 8260B, and 6010B, respectively. Prior to construction, a Soil Management Plan should be prepared. During construction, soil excavations conducted on site shall be monitored for visible soil staining and odor. Impacted soils shall be disposed off site in accordance with pertinent local, state, and federal regulatory guidelines.

MM-HAZ-3: If yellow traffic markings are removed separately from the adjacent pavement, the markings shall be removed and sampled for lead chromate prior to construction, consistent with the current Caltrans' Standard Special Provisions (SSP).

MM-HAZ-4: Should evidence of naturally-occurring oil seeps within the Project area, or impacted soil from a crude oil pipeline beneath Alameda Street be observed, the Caltrans Unknown Hazard Procedures shall be implemented during construction activities.

3.9.6 Level of Significance after Mitigation

Compliance with regulations and implementation of the mitigation measures HAZ-1 through HAZ-4 would reduce project and direct, indirect and cumulative construction-related impacts related to hazards and hazardous materials to below the level of significance.

3.10 Hydrology and Water Quality

This section of the Environmental Impact Report (EIR) analyzes potential impacts to hydrology and water quality from construction, operation, and maintenance of the proposed Los Angeles Union Station and Esplanade Improvements Project (proposed project). The analysis of hydrology and water quality consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project study area, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

3.10.1 Regulatory Setting

Federal

Wild and Scenic Rivers Act of 1968 (WSRA)

The objective of the WSRA (Public Law 90-542), dated October 2, 1968, is the preservation of certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition. The WSRA provides permanent protection for some of the country's most outstanding free flowing rivers and prohibits federal support for actions such as the construction of dams or other harmful instream activities.

Clean Water Act of 1972, as amended (CWA)

The law was originally enacted as the Federal Water Pollution Control Act (FWPCA; Public Law 92-500) in 1948, but took on its modern form when completely rewritten in 1972 in an act entitled the Federal Water Pollution Control Act Amendments of 1972, now commonly known as the CWA. Major changes have subsequently been introduced via amendatory legislation including the CWA of 1977 and the Water Quality Act of 1987.

The status of what constitutes is a ''water of the United States'' has been evaluated in light of the most current rulemaking.[1] The U.S. Environmental Protection Agency (EPA) and the Department of the Army have promulgated a series of regulations defining ''waters of the United States.'' The scope of ''waters of the United States'' as defined by the prior regulations, has been subject to litigation in several U.S. Supreme Court cases, most recently in *Rapanos v. United States*, 547 U.S. 715 (2006) (Rapanos). In response to that decision, the agencies issued guidance regarding CWA jurisdiction in 2007, and revised it in 2008. In response to that guidance, the EPA and the Department of the Army were asked to replace the guidance with a regulation. On June 29, 2015, the EPA and the U.S. Army Corps of Engineers (USACOE) jointly published the final WOTUS Rule (40 CFR Parts 110, 112, 116, *et al.* and 33 CFR Part 328) for determining the extent to which wetlands and other water features are protected under the CWA. Due to concerns about the potential for continued regulatory uncertainty, as well as the scope and legal

[1] U.S. Department of Defense and U.S. Environmental Protection Agency. 6 March 2017. "Invitation to Review and Rescind or Revise the Clean Water Rule." *Federal Register* 82 (42): 12532.

authority of the 2015 Rule, 31 states and a number of other parties sought judicial review in multiple actions. On February 28, 2017, the President of the United States issued an Executive Order directing the EPA and the Army to review and rescind or revise the 2015 Rule. On March 6, 2017, the EPA and the Army announce their intention to review that rule, and provide advanced notice of a forthcoming proposed rulemaking consistent with the Executive Order. In doing so, the agencies will consider interpreting the term "navigable waters," as defined in the CWA in a manner consistent with the opinion of Justice Scalia in Rapanos.

The CWA is the primary federal law in the United States governing water pollution. Its objective is to restore and maintain the chemical, physical, and biological integrity of the nation's waters by preventing point and nonpoint pollution sources, providing assistance to publicly owned treatment works for the improvement of wastewater treatment, and maintaining the integrity of wetlands. It is one of the United States' first and most influential modern environmental laws. As with many other major U.S. federal environmental statutes, it is administered by the EPA, in coordination with state governments. Its implementing regulations are codified at 40 C.F.R. Subchapters D, N, and O (Parts 100-140, 401-471, and 501-503).

Section 303(d)

Section 303(d) of the Federal CWA requires the State Water Resources Control Board (SWRCB) to list impaired water bodies and determine Total Maximum Daily Load (TMDLs) of pollutants or other stressors that are contributing excessively to these impaired waters.

Section 401 – Water Quality Certification

Section 401 establishes the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters. Under the CWA, the EPA has implemented pollution control programs such as setting wastewater standards for industries and surface waters.

Section 402

Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) permit process. In California, NPDES permitting authority is delegated to, and administered by the nine Regional Water Quality Control Boards (RWQCBs). Pursuant to Section 402, a discharge of any pollutant from a point source into navigable waters, are prohibited unless an NPDES permit is obtained. Point sources are discrete conveyances such as pipes or manmade ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

Section 402(p) establishes that, storm water permits are required for discharges from a municipal separate storm sewer system (MS4) serving a population of 100,000 or more. The EPA defines an MS4 as a conveyance or system of conveyances (including roads with drainage systems, municipal streets,

catch basins, curbs, gutters, ditches, man-made channels, or storm drains) owned or operated by a State (40 CFR 122.26(b)(8)).

The California Department of Transportation (Caltrans) is responsible for the design, construction, management, and maintenance of the State highway system, including freeways, bridges, tunnels, Caltrans' facilities, and related properties, and is subject to the permitting requirements of CWA Section 402(p). Caltrans' discharges consist of storm water and non-storm water discharges from state-owned rights-of-way.

Before July 1999, discharges from Caltrans' MS4 were regulated by individual NPDES permits issued by the RWQCBs. On July 15, 1999, the SWRCB issued a statewide permit (Order No. 99-06-DWQ) that regulated all discharges from Caltrans MS4s, maintenance facilities, and construction activities. On September 19, 2012, Caltrans' permit was reissued (Order No. 2012-0011-DWQ), and it became effective on July 1, 2013.

Caltrans' Storm Water Management Plan (SWMP) describes the procedures and practices used to reduce or eliminate the discharge of pollutants to storm drainage systems and receiving waters. A revised SWMP must be submitted to the State Water Board for approval by July 1, 2014.

Section 404 – Discharge of Dredge or Fill Material

Section 404 of the federal CWA is administered and enforced by the USACOE. Section 404 of the CWA establishes a program to regulate the discharge of dredge and fill material into waters of the United States, including wetlands. USACOE administers the day-to-day program, including the determination of eligibility of project for use of Categorical Exclusions and Nationwide Permits, and review and consideration of individual permit decisions and jurisdictional determinations. USACOE also develops policy and guidance; and enforces Section 404 provisions.

Pollution Prevention Act of 1990

The Pollution Prevention Act (42 USC §13101 et seq.) focused on reducing the amount of pollution through cost-effective changes in production, operation, and raw materials. The Act focuses on source reduction which reduces the release of hazardous substances through practices that increase efficiency in energy, water, or other natural resources.

Antidegradation Policy

The Antidegradation Policy under the EPA's Water Quality Standards Regulations (48 F.R. 51400, 40 CFR 131.12, November 8, 1983), requires states and tribes to establish a three-tiered antidegradation program to prevent a decrease in water quality standards.

- Tier 1—Maintains and protects existing uses and water quality conditions that support such uses. Tier 1 is applicable to all surface waters.

- Tier 2—Maintains and protects "high quality" waters where existing conditions are better than necessary to support "fishable/swimmable" waters. Water quality can be lowered in such waters but not to the point at which it would interfere with existing or designed uses.
- Tier 3—Maintains and protects water quality in outstanding national resource waters (ONRWs). Water quality cannot be lowered in such waters except for certain temporary changes.

Antidegradation was explicitly incorporated into the federal CWA through 1987 amendments, codified in section 303(d)(4)(B), requiring satisfaction of antidegradation requirements before making certain changes in NPDES permits.

Executive Order 11988, Flood Plain Management

The objective of Presidential Executive Order 11988, dated May 24, 1977, is the avoidance of, to the extent possible, long- and short-term adverse impacts associated with the occupancy and modification of the base floodplain (100-year floodplain) and the avoidance of direct and indirect support of development in the base floodplain wherever there is a practicable alternative. Under the Executive Order, the USACOE must provide leadership and take action to:

- Avoid development in the base floodplain unless it is the only practicable alternative
- Reduce the hazard and risk associated with floods
- Minimize the impact of floods to human safety, health, and welfare
- Restore and preserve the natural and beneficial values of the base floodplain

State

Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act of 1967 (Cal. Water Code Section 13000 et seq.) requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative to the applicable and numerical water quality standards, and implementation procedures.

The Porter-Cologne Water Quality Control Act also authorizes the State Boards to adopt, review, and revise policies for all waters of the state (including both surface and ground waters) and directs the regional boards to develop Basin Plans. The act also authorizes State Boards to adopt Water Quality Control Plans. In the event of inconsistencies among state and regional board plans, the more stringent provisions apply.

Lake or Streambed Alteration

The California Department of Fish and Wildlife (CDFW) is responsible for conserving, protecting, and managing California's fish, wildlife, and native plant resources. To meet this responsibility, Section 1600 of the California Fish and Game Code requires an entity to notify CDFW of any proposed activity that

may substantially modify a river, stream, or lake. Notification is required by any person, business, state, or local government agency or public utility that proposes an activity that will:

- Substantially divert or obstruct the natural flow of any river, stream or lake
- Substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake
- Deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake

The notification requirement applies to any work undertaken in or near a river, stream, or lake that flows at least intermittently through a bed or channel. This includes ephemeral streams, desert washes, and watercourses with a subsurface flow. It may also apply to work undertaken within the flood plain of a body of water. If CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. In August 2005, the California Fish and Game Commission policy regarding wetlands resources stated that "it is the policy of the Fish and Game Commission to seek to provide for the protection, preservation, restoration, enhancement and expansion of wetland habitat in California" and to "strongly discourage development in or conversion of wetlands."[2] As a result, although the Commission has no independent statutory permitting authority related to wetlands, the policy underscores that the Commission does not support wetland development proposals unless "project mitigation assures there will be 'no net loss' of either wetland habitat values or acreage" and "prefers mitigation which would achieve expansion of wetland acreage and enhancement of wetland habitat values." The Agreement includes reasonable conditions necessary to protect those resources and must comply with the California Environmental Quality Act (CEQA). The entity may proceed with the activity in accordance with the final Agreement.

Sustainable Groundwater Management Act (SGMA)

On September 16, 2014, Governor Edmund G. Brown Jr. signed a three-bill package known as the Sustainable Groundwater Management Act. The legislation allows local agencies to customize groundwater sustainability plans to their regional economic and environmental needs. SGMA creates a framework for sustainable, local groundwater management for the first time in California history.

The three bills that make up SGMA are Assembly Bill (AB) 1739 by Assembly Member Roger Dickinson, Senate Bill (SB) 1319, and SB 1168 by Senator Fran Pavley.

In September 2015, Governor Brown signed SB 13, by Senator Fran Pavley. The Bill makes various technical, clarifying changes to SGMA including requirements for groundwater sustainability agency formation, the process for State Water Board intervention if no responsible agency is specified for a

[2] California Fish and Game Commission. Accessed 14 September 2015. *Miscellaneous Policies: Wetlands Resources.* Available at: http://www.fgc.ca.gov/policy/p4misc.aspx#WETLANDS

basin, guidelines for high- and medium-priority basins, and participation of mutual water companies in a groundwater sustainability agency.

Regional

Water Quality Control Plan for the Los Angeles Region

The RWQCB has prepared a Water Quality Control Plan for the Los Angeles Region (Basin Plan), which encompasses all coastal drainages flowing to the Pacific Ocean between Rincon Point (on the coast of western Ventura County) and the eastern Los Angeles County line, as well as the drainages of five coastal islands (Anacapa, San Nicolas, Santa Barbara, Santa Catalina, and San Clemente). In addition, the Los Angeles region includes all coastal waters within three miles of the continental and island coastlines. As the eastern boundary, formed by the Los Angeles County line, departs somewhat from the hydrologic divide, the Los Angeles and Santa Ana regions share jurisdiction over watersheds along their common border. The first essentially complete Basin Plan, which was established under the requirements of California's 1969 Porter-Cologne Water Quality Control Act (Section 13000 [Water Quality] *et seq*. of the California Water Code), was adopted in 1975 and revised in 1984. The latest version was adopted in 1994.

The Basin Plan assigned beneficial uses to surface and groundwater such as municipal water supply and water-contact recreation to all waters in the basin. It also set water quality objectives, subject to approval by the EPA, intended to protect designated beneficial uses. These objectives apply to specific parameters (numeric objectives) and general characteristics of the water body (narrative objectives). An example of a narrative objective is the requirement that all waters must remain free of toxic substances in concentrations producing detrimental effects upon aquatic organisms. Numeric objectives specify concentrations of pollutants that are not to be exceeded in ambient waters of the basin.

The Los Angeles RWQCB is involved is the regulation of a number of activities that are relevant to the consideration of the Project:

- Prepares, monitors compliance with, and enforces Waste Discharge Requirements, including NPDES permits
- Implements and enforces local stormwater control efforts
- Enforces water quality laws, regulations, and waste discharge requirements
- General Construction Activity Stormwater Discharges

Stormwater discharges that are composed entirely of runoff from qualifying construction activities may require regulation under the General Construction Activity Storm Water Permit issued by the SWRCB. Construction activities that qualify include clearing, grading, excavation, reconstruction, and dredge-and-fill activities that result in the disturbance of at least 1 acre and less than 5 acres of total land area. Qualifying projects require the consideration of a Standard Urban Stormwater Management Plan (SUSMP) as part of compliance with the NPDES General Construction Activity Storm Water Permit to reduce water quality impacts to the maximum extent practicable. A SUSMP is a report that includes one

or more site maps, an identification of construction activities that could cause pollutants to enter the stormwater, and a description of measures or best management practices (BMPs) to control these pollutants to the maximum extent practicable.

County of Los Angeles General Plan

The County Board of Supervisors adopted the Water and Waste Management element as a component of the County General Plan;[3] the provisions of the element were updated, revised, combined, and included in the Public Facilities Chapter in the County Streamlined General Plan (General Plan).[4] The Water Supply and Distribution section addresses policies direction for water resources of the County.

Specifically, the General Plan includes goals and policies to conserve water and protect water quality that are relevant to the proposed project: [5]

Policy 1. Program water and sewer services extensions to be consistent with General Plan policies and to mitigate situations that pose immediate health and safety hazards.

Policy 8. Design water and waste management systems which enhance the appearance of the neighborhoods in which they are located and minimize negative environmental impacts.

Policy 10. Encourage compatible, multiple use of water and waste management facilities, including public recreational utilization, where consistent with their original purpose and the maintenance of water quality.

Policy 16. Encourage development and application of water conservation, including recovery and reuse of storm and waste water.

Policy 21. Protect public health and prevent pollution of ground water through the use of whatever alternative is necessary.

Policy 24. Design flood control facilities to minimize alteration of natural stream channels.

Policy 25. Design and construct new water and waste management facilities to maintain or protect existing riparian habitats.

[3] County of Los Angeles Department of Regional Planning. 1980. *County of Los Angeles General Plan, Water and Waste Management Element.* Los Angeles, CA.

[4] County of Los Angeles Department of Regional Planning. January 1993. *County of Los Angeles Streamlined General Plan.* Los Angeles, CA.

[5] County of Los Angeles Department of Regional Planning. January 1993. *County of Los Angeles Streamlined General Plan.* Los Angeles, CA.

Local

Conservation Element of the City of Los Angeles General Plan

The Conservation Element of the City of Los Angeles General Plan defines conservation as the managed or controlled use of natural, cultural and Historical resources. In Los Angeles it includes a diversity of programs, including acquiring, preserving and protecting large tracts of open space for habitat conservation, species protection, watershed maintenance and other purposes; acquiring, preserving and protecting cultural and historical resources; reducing the demand for nonrenewable mineral and petroleum resources, water and other natural resources; recycling water, wood products, metals, glass and other materials.

Erosion Objective: protect the coastline and watershed from erosion and inappropriate sedimentation that may or has resulted from human actions.

Policy 1: support legislation and efforts to secure and retain federal funding for Pacific coast beach protection and renourishment programs.

Policy 2: continue to prevent or reduce erosion that will damage the watershed or beaches or will result in harmful sedimentation that might damage beaches or natural areas.

Safety Element of the City of Los Angeles General Plan

The Safety Element of the City of Los Angeles General Plan identifies three objectives in relation the Hazard Mitigation that are relevant to the consideration of the proposed project:

Hazard Mitigation; Goal 1; Objective 1.1

1.1.4 Health/environmental protection. Protect the public and workers from the release of hazardous materials and protect City water supplies and resources from contamination resulting from accidental release or intrusion resulting from a disaster event, including protection of the environment and public from potential health and safety hazards associated with program implementation. (All EOO hazardous materials hazard and water pollution mitigation programs implement this policy**.)**

1.1.5 Risk reduction. Reduce potential risk hazards due to natural disaster to the greatest extent feasible within the resources available, including provision of information and training. (All programs that incorporate current data, knowledge and technology in revising and implementing plans [including this Safety Element], codes, standards and procedures that are designed to reduce potential hazards and risk from hazards potentially associated with natural disasters implement this policy.)

1.1.6 State and federal regulations. Assure compliance with applicable state and federal planning and development regulations, e.g., Alquist-Priolo Earthquake Fault Zoning Act, State

Mapping Act and Cobey-Alquist Flood Plain Management Act. (All EOO natural hazard enforcement and implementation programs relative to non-City regulations implement this policy.)

Alameda District Specific Plan

Phase I and Phase II of the Alameda District Specific Plan provide guidance related to stormwater management and pollution prevention that are relevant to the consideration of the proposed project: [6]

1. To reduce erosion, protective measures (e.g., placement of sandbags around basins, construction of a berm to keep runoff from flowing into the construction site, or keeping motor vehicles at a safe distance from the edge of excavation) shall be implemented during construction.
2. Storm water discharges from the site shall meet, at a minimum, all applicable requirements of the State Regional Water Quality Control Board and NPDES permit requirements, and shall comply with implementation of these requirements through responsible City and County of Los Angeles agencies.
3. A Storm Water Pollution Prevention Program (SWPPP) shall be prepared and submitted for review and approval by the Bureau of Engineering, Storm water Management Division. The SWPPP shall identify pollutants and applicable Best Management Practices (BMPs) to manage runoff quality.
4. A drainage plan shall be developed, subject to the approval of the City Engineer, as part of the Plan Check process and prior to development of any drainage improvements.

City of Los Angeles Low Impact Development (LID) Ordinance No. 181899

The main purpose of this law is to ensure that development and redevelopment projects mitigate runoff in a manner that captures rainwater at its source, while utilizing natural resources. Project applicants are required to prepare and implement a stormwater mitigation plan when their projects fall into specific categories defined by the Ordinance:

- Single-family hillside residential developments
- Housing developments of 10 or more dwelling units (including single family tract developments)
- Industrial /Commercial developments with one acre or more of impervious surface area
- Automotive service facilities*
- Retail gasoline outlets*
- Restaurants*
- Parking lots of 5,000 square feet or more of surface area or with 25 or more parking spaces

[6] City of Los Angeles Department of City Planning. Effective 18 June 1996. *Alameda District Specific Plan.* A part of the City General Plan. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF

- Projects with 2,500 square feet or more of impervious area that are located in, adjacent to, or draining directly to designated Environmentally Sensitive Areas (ESA)

The LID ordinance expands the existing SUSMP requirements by imposing rainwater LID strategies on projects that require building permits. The ordinance requires construction activities and facility operations of Development and Redevelopment projects to comply with the requirements of the SUSMP, and integral LID practices and standards for stormwater pollution mitigation, and maximize open, green, and pervious space on all Developments and Redevelopments consistent with the City's landscape ordinance and other related requirements in the Development Best Management Practices Handbook. LID shall be inclusive of SUSMP requirements.

The City has established specific LID requirements for projects that will be taken into consideration in the design and development of the proposed project:

1. The site for every Development or Redevelopment shall be designed to manage and capture stormwater runoff, to the maximum extent feasible, in priority order: infiltration, evapotranspiration, capture and use, treated through high removal efficiency biofiltration/biotreatment system of all of the runoff on site. High removal efficiency biofiltration/biotreatment systems shall comply with the standards and requirements of the Development Best Management Practices Handbook. A LID Plan shall be prepared to comply with the following:
    a. Stormwater runoff will be infiltrated, evapotranspired, captured and used, treated through high removal efficiency Best Management Practices, onsite, through stormwater management techniques that comply with the provisions of the Development Best Management Practices Handbook. To the maximum extent feasible, onsite strormwater management techniques must be properly sized, at a minimum, to infiltrate, evapotranspire, store for use, treat through high removal efficiency biofiltration/biotreatment system, without any storm water runoff leaving the Site for at least the volume of water produced by the quality design storm event that results from:
        i. The 85th percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1988); or
        ii. The volume of annual runoff based on unit basin storage water quality volume, to achieve 850 percent or more volume treatment by the method recommended in the California Stormwater Best Management Practices Handbook – Industrial/Commercial, (2003); or
        iii. The volume of runoff produced from a 0.75 inch storm event.
    b. Pollutants shall be prevented from leaving the Site for a water quality design storm event as defined in Paragraph (a) of this Subdivision unless it has been treated through an onsite high removal efficiency biofiltration/biotreatment system.

c. Hydromodification impacts shall be minimized to natural drainage systems as defined in the MS4 Permit.

2. If partial or complete onsite compliance of any type is technically infeasible, the project Site and LID Plan shall be required to comply with all applicable Standard Urban Stormwater Mitigation Plan (SUSMP) requirements in order to maximize onsite compliance. For the remaining runoff that cannot feasibly be managed onsite, the project shall implement offsite mitigation on public and/or private land within the same sub-watershed out of the following five sub-watersheds: Upper Los Angeles River, Lower Los Angeles River, Ballona Creek, Santa Monica Bay, and Dominguez Channel. This shall include construction and perpetual maintenance of projects that will achieve at least the same level of runoff retention, infiltration and/or use, and water quality. All City Departments will assist the developer, when and where feasible, in the design, permitting and implementation of LID BMP projects within the public right of way, with a preference for utilizing the public right of way immediately adjacent to the subject development.
3. A Multi-Phased Project may comply with the standards and requirements of this Section for all of its phases by: (a) designing a system acceptable to the Bureau of Sanitation to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this Section, "Multi-Phased Project" shall mean any Development or Redevelopment implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.
4. The Director shall prepare, maintain, and update, as deemed necessary and appropriate, the Development Best Management Practices Handbook to set LID standards and practices and standards for stormwater pollution mitigation, including urban and stormwater runoff quantity and quality control development principles and technologies for achieving the LID standards. The Development Best Management Practices Handbook shall also include technical feasibility and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the Director deems necessary for implementing the provisions of this Section of the Los Angeles Municipal Code. The Board of Public Works shall adopt the Development Best Management Practices Handbook no later than 90 days after the adoption of this Ordinance by the City Council and the Mayor.
5. The Director of the Bureau of Sanitation shall develop as deemed necessary and appropriate, in cooperation with other City departments and stakeholders, informational bulletins, training manuals and educational materials to assist in the implementation of the LID requirements.

6. The applicant can appeal the Director's determination of compliance with the provisions of this Article to the Board of Public Works within 30 days of the date of the determination.
7. Any Development or Redevelopment that is exempted from LID requirements under section 0 has the option to voluntarily opt in and incorporate into the project the LID requirements set forth herein. In such case, the Best Management Practices plan check fee associated with the project shall be waived and all LID related plan check processes shall be expedited.
8. Any Development or Redevelopment exempted from this Ordinance under section 0 shall comply with all applicable SUSMP requirements.

3.10.2 Affected Environment/Existing Conditions

Water Quality

The RWQCB has prepared a Water Quality Control Plan for the Los Angeles Region (Basin Plan). The Basin Plan assigned beneficial uses to surface and groundwater such as municipal water supply and water-contact recreation to all waters in the basin. There are no water bodies that are within the proposed project boundary (Figure 3.10.2-1, *Blueline Drainages Map*). The Los Angeles River is approximately 0.5 miles east of the proposed project location. This reach of the Los Angeles River (Reach 3 – Figueroa St. to Riverside Dr.) is impaired for the following pollutants: ammonia, copper, lead, nutrients-algae, and trash. A TMDL for this reach of the Los Angeles River was developed for metals, nitrogen, and trash.

Based on site reconnaissance and a review of the U.S. Geological Survey (USGS) 7.5-minute series Los Angeles, California, topographic quadrangle, there are no natural or manmade surface water impoundments on the project site.[7]

Groundwater

The majority of the project site, except the portion along Arcadia Street between Main Street and Spring Street, is located in the northern portion of the Central Groundwater Basin of the Los Angeles Coastal Plain (Figure 3.10.2-2, *Groundwater Basins within a 10-Mile Radius of the Project Location*). The Central Basin is bound to the north by the Hollywood Basin and the Elysian, Repetto, Merced, and Puente Hills; to the east by the Los Angeles County/Orange County line; and to the south and west by the Newport-Inglewood uplift. Groundwater in the Central Basin occurs in Holocene- and Pleistocene-age sediments at relatively shallow depths. The Central Basin is historically divided into Forebay and Pressure areas.

[7] U.S. Geological Survey. 1981. *7.5-Minute Series, Los Angeles, California, Topographic Quadrangle*. Reston, VA.

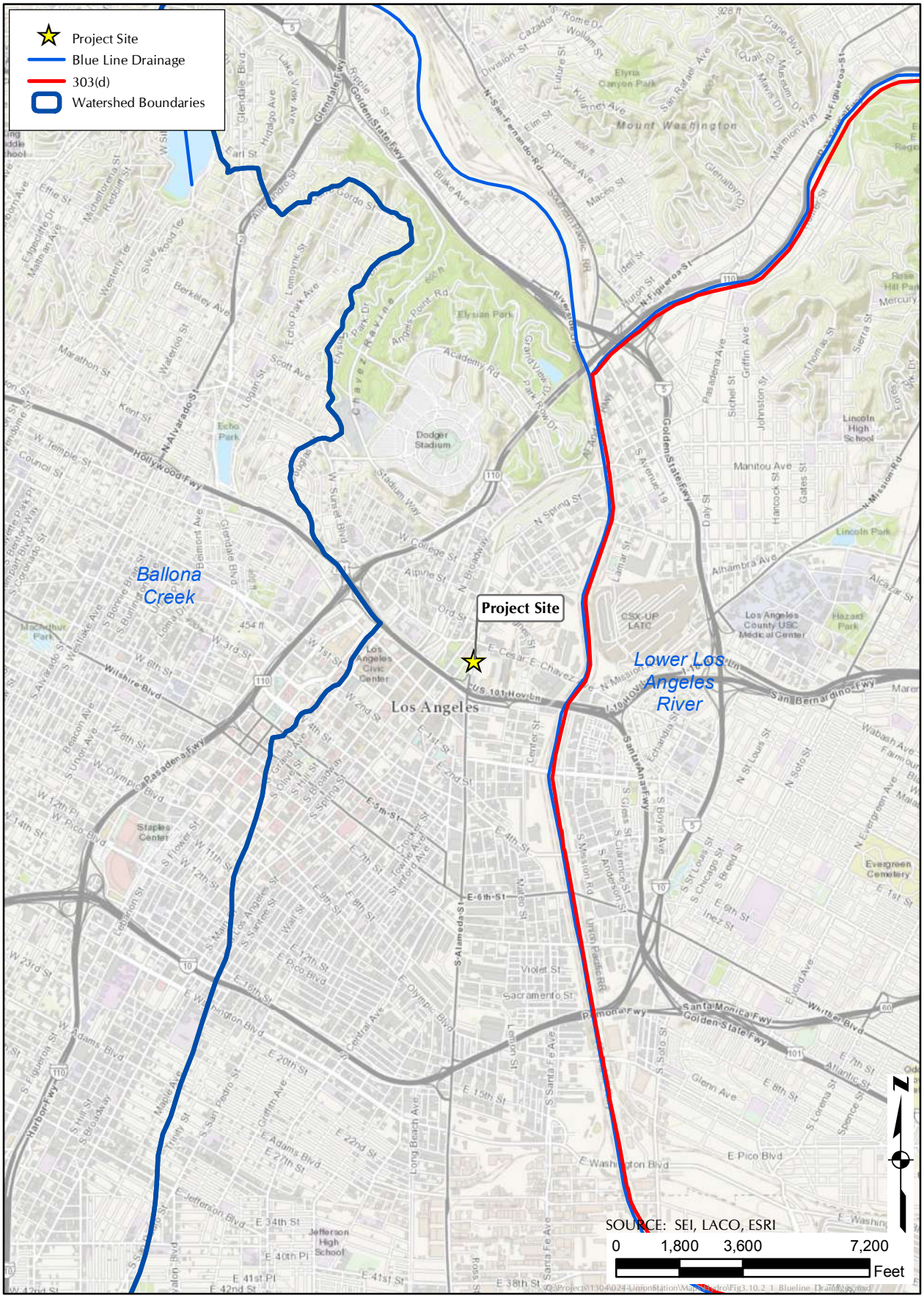


Figure 3.10.2-1. Blueline Drainages Map

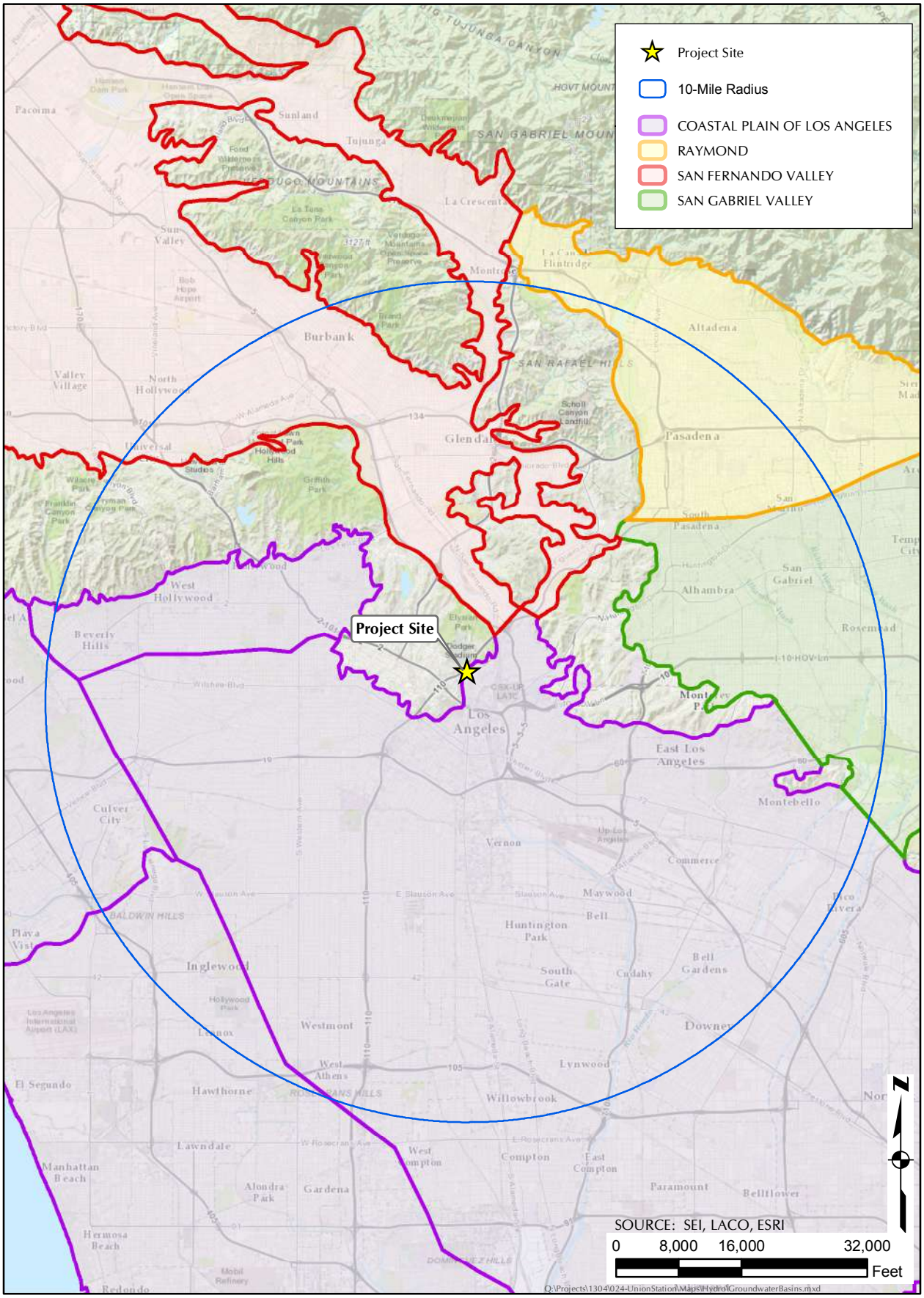


Figure 3.10.2-2. Groundwater Basins within a 10-Mile Radius of the Project Location

The project site is located in the northernmost portion of the Central Basin Pressure area, which is the largest of four divisions. It contains many aquifers of permeable sands and gravels, separated by semi-permeable to impermeable sandy clay to clay, that extend to about 2,200 feet below the surface. The Pressure area includes the following formational units and aquifers: Alluvium (Gaspur and Semi-perched aquifers), Lakewood Formation (Gardena and Gage aquifers), and San Pedro Formation (Lynwood, Silverado, and Sunnyside aquifers). The main source of potable groundwater in the Central Basin is from the deeper aquifers of the San Pedro Formation (including from top to bottom, the Lynwood, Silverado and Sunnyside aquifers), which generally correlate with the Main and Lower San Pedro aquifers of Orange County.

Regional groundwater water levels varied over a range of about 25 feet between 1961 and 1977 and have varied within a range of about 5 to 10 feet since 1996. Based on regional data, the historic groundwater flow direction in the Central Basin has been from recharge areas in the northeast of the basin, toward the Pacific Ocean to the southwest. Pumping patterns have lowered the water level in large portions of the Central Basin. Project-specific conditions may vary due to a variety of factors including geologic anomalies, utilities, nearby pumping wells (if present), and other factors.

Based on a Soil and Groundwater Management Plan for the California Endowment Terminal Annex Property located approximately 400 feet northeast of the project area, groundwater was encountered at depths between 22 and 32 feet below ground surface and flowed to the south-southwest.[8]

Regional groundwater quality problems in the project area were not identified. However, impacted groundwater was noted to be present approximately 1,400 feet east of the project area as a result of a former Aliso Street Manufactured Gas Plant (MGP), which formerly occupied a large portion of properties located to the north and south of Highway 101. Groundwater beneath the former MGP, and in the immediate vicinity, was impacted by petroleum hydrocarbon constituents, VOCs, chlorinated solvents, polyaromatic hydrocarbons (PAHs), and metals.

There are no groundwater recharge areas or groundwater extraction wells on the proposed project site.[9]

Drainage Patterns and Erosion and Siltation

Based on a review of the USGS Los Angeles, California, topographic quadrangle, the project area is generally situated at an approximate elevation of 280 feet above mean sea level (MSL) with the western extent along Arcadia Street reaching approximately 300 feet MSL. The topographic relief is generally flat in the project area, sloping gently toward the east-southeast. There are no blue-line drainages within

[8] Geomatrix Consultants, Inc. 19 May 2014. *Soil and Groundwater Management Plan, The California Endowment Terminal Annex Property, 760 North Main Street, Los Angeles, California.*

[9] Metropolitan Water District of Southern California. 2010. *The Regional Urban Water Management Plan, Fig. A 2-2.* Los Angeles, CA.

the proposed project boundary. The project site is characterized by impervious surface. The majority of the project site is covered with concrete sidewalks and asphalt streets and parking lots, with intermittent landscape planters. The Los Angeles River is approximately 0.5 miles east of the proposed project. Man-made stormwater conveyance systems exist within the proposed project boundary (Figure 3.10.2-3, *Drainage Map*).

Existing or Planned Stormwater Conveyance Systems

The project area slopes gently toward the east-southeast towards the Los Angeles River (Figure 3.10.2-3). Existing storm drains are located within the proposed project perimeter. LID BMPs will be implemented in accordance with the City's LID Ordinance, whereby new areas of permeable paving and landscaping would allow for percolation and reduction of runoff, and water runoff after development would not exceed the capacity of existing or planned drainage systems. Additionally, drainage of the forecourt would support stormwater capture and reuse, increasing climate comfort while supporting on-site landscape and urban ecology. For sustainability, the project aims to have the majority of the ground surfaces be decomposed granite and other porous paving materials including porphyry pavers and porous concrete to promote a porous ground plane and enhance pedestrian circulation; and as a result of these BMPs in accordance with the LID Plan, no new storm drains are anticipated.

Housing within a 100-year Flood Hazard Zone

The project area does not fall with in a City of Los Angeles 100-year and 500-year flood plain as mapped by the Federal Emergency Management Agency (FEMA) (Figure 3.10.2-4, *Flood Plains within a 10-Mile Radius of the Project Location*).[10] The project is located within FEMA flood zone X, representing a minimal flood hazard. No people or structures are located within the proposed project site.

Seiche, Tsunami, or Mudflows

A seiche is an oscillation of a body of water in an enclosed or semi-enclosed basin, such as a reservoir, harbor, lake, or storage tank. A tsunami is a great sea wave produced by a significant undersea disturbance. Mudflows result from the downslope movement of soil and/or rock under the influence of gravity. The project area does not fall within a City of Los Angeles inundation and tsunami hazard area (Figure 3.10.2-5, *Inundation and Tsunami Hazard Map*).[11] According to the USGS topographic quadrangle map, the site is at an approximate elevation of 200 feet above MSL. The project site is not located within Inundation and Tsunami Hazard Areas delineated in the City of Los Angeles Safety Element (Figure 3.10.2-5).[12]

[10] City of Los Angeles. March 1994. *General Plan Safety Element, 100-Year and 500-Year Flood Plains*, Exhibit F.

[11] City of Los Angeles. March 1994. *General Plan Safety Element, Inundation and Tsunami Hazard Areas*, Exhibit G.

[12] City of Los Angeles. March 1994. *General Plan Safety Element, Inundation and Tsunami Hazard Areas*, Exhibit G.

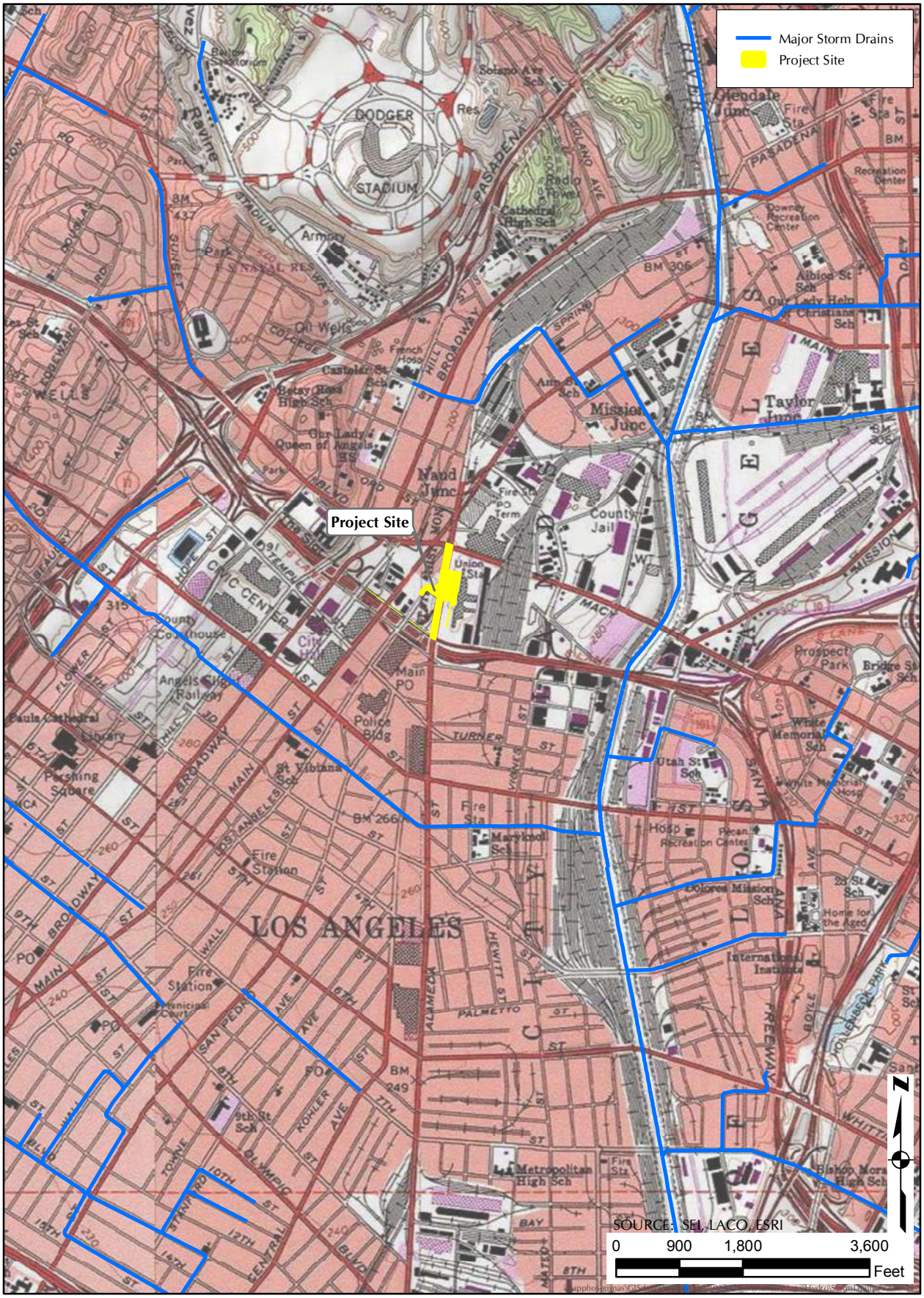


Figure 3.10.2-3. Drainage Map

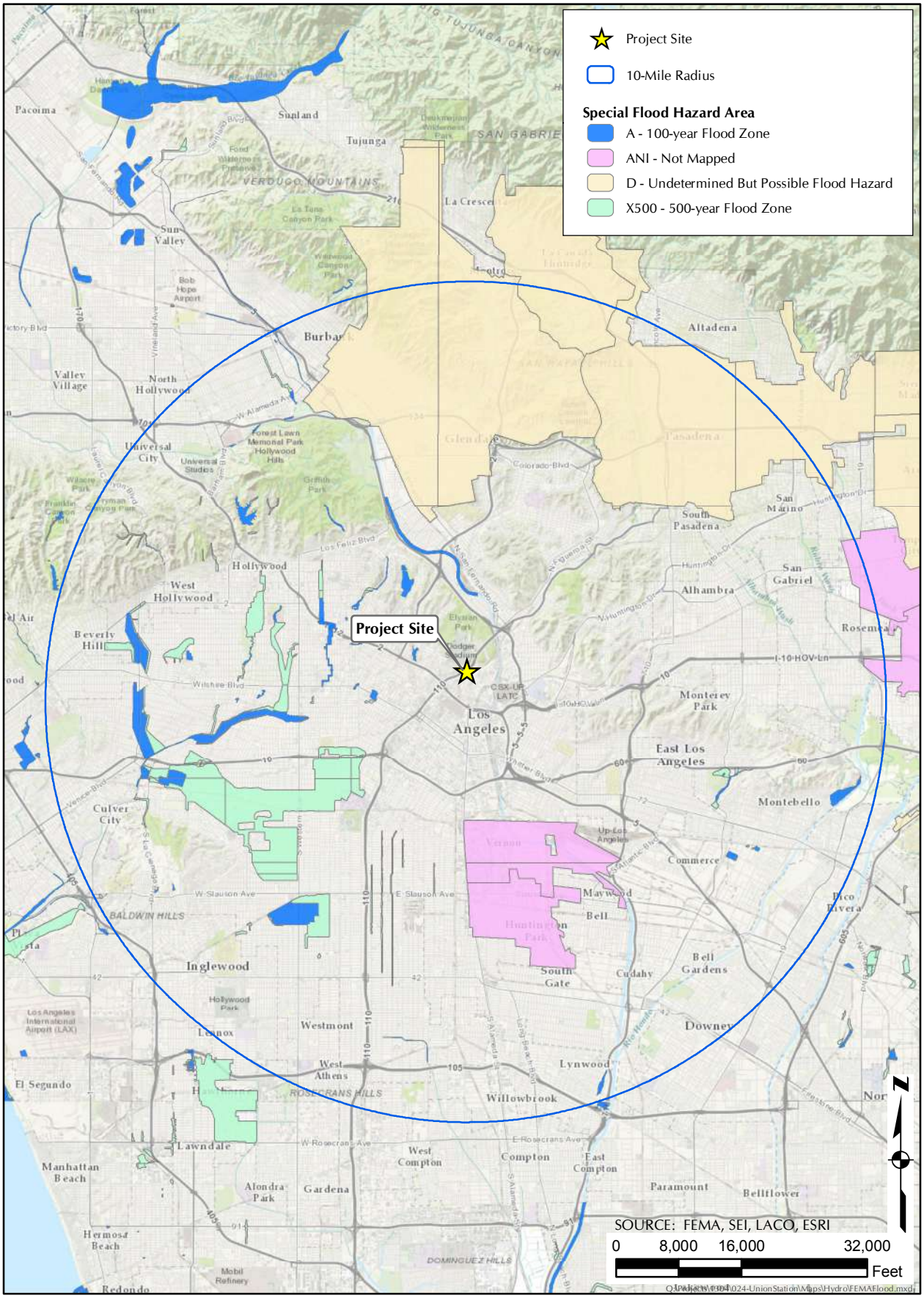


Figure 3.10.2-4. Flood Plains within a 10-Mile Radius of the Project Location

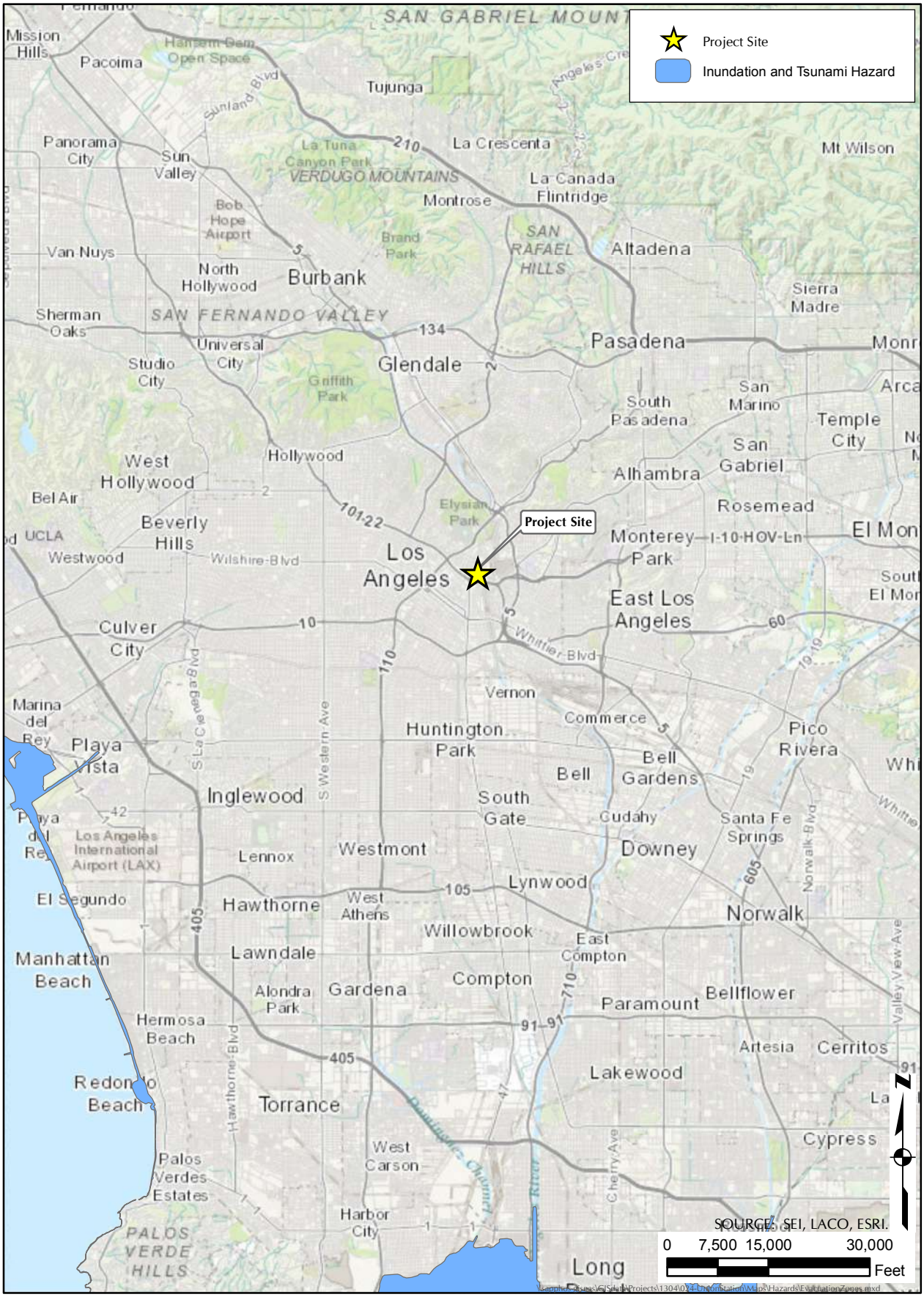


Figure 3.10.2-5. Inundation and Tsunami Hazard Map

In addition, the proposed project site is not in the vicinity of or downslope from a reservoir or storage tank capable of creating a seiche.[13] The project site, which is not located within a hilly area or positioned downslope from any unprotected slopes or landslide areas, is not positioned in an area of potential mudflow.

The proposed project would not be subject to inundation from seiche, tsunami, or mudflow.

3.10.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of 10 questions when addressing the potential for significant impacts to hydrology and water quality. Would the project:

(a) Violate any water quality standards or waste discharge requirements?

The proposed project would result in less than significant impacts to hydrology and water quality in relation to water quality standards or waste discharge requirements. A significant impact would occur if the project violated any water quality or waste discharge requirements. Site drainage is controlled by sheet flow, surface infiltration and City-maintained storm drains located along nearby streets. Regional drainage is provided by the Los Angeles River, which is located approximately 0.5 miles east of the proposed project site. LID BMPs will be implemented in accordance with the City's LID Ordinance to capture and reuse stormwater to prevent polluted stormwater from leaving the project site.

The proposed project would focus on perimeter improvements to improve pedestrian accessibility and connectivity. The proposed improvements to LAUS include: removing the short-term parking northwest of the entrance to LAUS (approximately 60 spaces) to create a new civic plaza with an outdoor seating area; creating a new esplanade along Alameda Street (between Cesar E. Chavez Avenue and Arcadia) by narrowing the roadway and reallocating roadway area for the expanded pedestrian and bicyclist multi-use esplanade on the eastside and widened sidewalks on the west; reconfiguring the entrance from LAUS to the El Pueblo de Los Angeles State Historic Park by creating a consolidated crosswalk that would provide additional pedestrian connectivity through the partial closure of Los Angeles Street and closure of the northern LAUS driveway on Alameda Street; and repurposing the northernmost travel lane on Arcadia Street between Alameda Street and Spring Street into a tour bus parking area designated for El Pueblo.

In addition to the above-mentioned improvements, the proposed Alameda Esplanade would: change three travel lanes in each direction and a left turn center lane to two lanes of travel with a left turn lane/center median and curb side drop-off on the east side of Alameda Street; and expand sidewalks on both sides of the street into the roadway and create a shared tree-lined multi-use path for both bicyclists and pedestrians on the east side of Alameda Street. The proposed project would result in the

[13] U.S. Geological Survey. 1981. *7.5-Minute Series, Los Angeles, California, Topographic Quadrangle*. Reston, VA.

replacement of existing concrete sidewalks, paved roadways and parking lots with roughly 170,000 square feet of sidewalk and pavement.

The RWQCB regulates runoff during clearing, grading, and excavation activities that may result in soil disturbance of any construction site of at least 1 acre of total land area. Additionally, the City LID Ordinance further regulates Development or Redevelopment that creates, adds or replaces 500 square feet or more of impervious area. The total project site encompasses approximately 6.71 acres, and therefore, construction activities would be subject to the requirements of a NPDES Permit issued by the RWQCB, as well as City LID requirements. The NPDES General Construction Permit requires that all developers of land where construction activities will occur over more than 1 acre to (1) develop and implement a SWPPP, which specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards; and (2) eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States. The SWPPP includes minimization of erosion, stabilization of construction areas, sediment control, control of pollutants from construction materials, as well as post-construction stormwater management (e.g., the minimization of impervious surfaces, treatment of stormwater runoff, etc.). The SWPPP must include a monitoring program that covers inspections and maintenance of BMPs. The City of Los Angeles Development Best Management Practices Handbook, Part A, Construction Activities, Second Edition, contains specific minimum BMP requirements for all construction activities. During project operation, a SUSMP is required to be implemented. The SUSMP and LID Ordinance contains required BMPs described in the City of Los Angeles Development Best Management Practices Handbook, Part B, Planning Activities. The SUSMP and LID Ordinance requires developers to mitigate (infiltrate or treat) the stormwater runoff (volume or flow rate) generated from 0.75 inches of rainfall over 24 hours.

The project would comply with all of the requirements set forth in the City's NPDES Development Planning Program and would incorporate appropriate BMPs in accordance the City's LID Ordinance, that are designed to reduce the potential pollutants of concern in the project's surface water runoff. The project's SUSMP and LID Plan would be reviewed and revised over time to ensure that BMPs are functioning properly and are effective at treating runoff from the site throughout the life of the project. The project would also incorporate BMPs that would detain surface water runoff as well as treating these waters, either actively or passively, before discharging these waters to the local storm drain system. Through the incorporation of the requisite BMPs, development of the project is anticipated to improve the quality of the water discharged from the site, compared to existing conditions. Compliance with the requirements of the NPDES Permit and the SUSMP would ensure that the construction and operation of the project would not violate any water quality or waste discharge requirements, and mitigation measures would not be required.

(b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

The proposed project would result in no impacts to groundwater supplies or groundwater recharge. The project area is served by the LADWP municipal water supply system and would not use local groundwater. The Los LADWP is responsible for providing water services to the proposed project site. Most of the City's water supply is purchased from the MWD, with the remainder supplied by the Los Angeles Aqueduct, local groundwater, and recycled water. Pursuant to SB 610 and SB 221, LADWP is not required to conduct a Water Supply Assessment because the proposed project does not trigger any of the three thresholds requiring preparation of a water supply assessment for an industrial park.

The increase of impervious areas resulting from the proposed project could reduce percolation, which could result in a reduction in groundwater recharge. As the majority of the project area is characterized by impervious concrete or asphalt, the project has the potential to increase permeability through the use of permeable concrete or pavers as part of the forecourt improvement that would replace the existing paved parking area in front of LAUS. Additionally, in an effort to provide sustainable site systems, the drainage of the forecourt would adhere to the City's LID Ordinance and BMPs would be implemented to support stormwater capture and reuse, increasing climate comfort while supporting on-site landscape and urban ecology. For sustainability, the project aims to have the majority of the ground surfaces be decomposed granite and other porous paving materials including porphyry pavers and porous concrete to promote a porous ground plane and enhance pedestrian circulation. Compliance with City SUSMP requirements would percolate up to 0.75 inch of captured rainfall over a 24-hour period to provide additional recharge. The project also complies with the objectives of Metro's Water Action Plan.[14] Thus, the project has the potential to facilitate stormwater capture, retention, and recharge. Therefore, the project would have no impacts to groundwater supplies or groundwater recharge, and mitigation measures would not be required.

(c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on or off site?

The proposed project would result in no impacts to alteration of existing drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site. There are no streams or rivers located in the immediate vicinity of project site. Project construction would temporarily expose on-site soils to surface water runoff. However, compliance with the required provisions of the SWPPP would minimize

[14] Los Angeles County Metropolitan Transportation Authority. June 2010. *Water Action Plan*. Prepared by ICF International and Brezcak & Associates Planning. Available at: http://media.metro.net/projects_studies/sustainability/images/Water_Plan2010_0825.pdf

the potential for erosion and siltation. During project operation, stormwater or any runoff irrigation waters would be directed into existing storm drains. Impermeable surfaces resulting from the development of the project would increase the volume of stormwater runoff. New areas of landscaping and compliance with SUSMP and LID requirements would implement stormwater BMPs such as porous pavement to allow some percolation and reduction of runoff, and the increase in surface runoff would not be substantial. Additionally, drainage of the forecourt would support stormwater capture and reuse, increasing climate comfort while supporting on-site landscape and urban ecology. For sustainability, the project aims to have the majority of the ground surfaces be decomposed granite and other porous paving materials including porphyry pavers and porous concrete to promote a porous ground plane and enhance pedestrian circulation. Therefore, the proposed project would result in no impacts to hydrology and water quality related to alteration of existing drainage patterns in a manner that would result in substantial erosion or siltation on- or off-site, and mitigation measures would not be required.

(d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?

The proposed project would result in no impacts to alteration of existing drainage patterns in a manner that would result in flooding on-site or off-site. The project site is relatively level throughout. A significant impact would occur if the project substantially altered the drainage pattern of an existing stream or river so that flooding would result. Based on a review of the 7.5-minute series topographical map, there are no streams or rivers located in the immediate vicinity of the project site. Under the proposed project, stormwater or any runoff irrigation waters would be directed into existing storm drains. Impermeable surfaces resulting from the development of the proposed project, including the development of a 300-square-foot small transit-serving building, would increase the volume of stormwater runoff. New areas of landscaping and compliance with SUSMP requirements would allow for percolation and a reduction of runoff, and the increase in surface runoff would not be substantial. Additionally, drainage of the forecourt would support stormwater capture and reuse, increasing climate comfort while supporting on site landscape and urban ecology. For sustainability, the project aims to have the majority of the ground surfaces be decomposed granite and other porous paving materials including porphyry pavers and porous concrete to promote a porous ground plane and enhance pedestrian circulation. Therefore, there would be no impacts to hydrology and water quality related to alteration of existing drainage patterns in a manner that would result in flooding on-site or off-site, and mitigation measures would not be required.

(e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff?

The proposed project would result in no impacts related to exceeding the capacity of existing or planned stormwater drainage systems or providing substantial additional sources of polluted runoff. A significant impact would occur if runoff water exceeded the capacity of existing or planned storm drain systems. Impermeable surfaces resulting from the development of the project, including the development of a

proposed 300-square-foot small transit-serving building, would increase the volume of storm water runoff. New areas of permeable paving and landscaping would allow for percolation and reduction of runoff, and water runoff after development would not exceed the capacity of existing or planned drainage systems. In addition, with the implementation of the required SWPPP during construction and the SUSMP and LID Plan as applicable during project operation, any potential sources of polluted runoff would be effectively controlled. Additionally, drainage of the forecourt would support stormwater capture and reuse, increasing climate comfort while supporting on-site landscape and urban ecology. For sustainability, the project aims to have the majority of the ground surfaces be decomposed granite and other porous paving materials including porphyry pavers and porous concrete to promote a porous ground plane and enhance pedestrian circulation. The project would not create or contribute runoff water that would exacerbate any existing deficiencies in the storm drain system or provide substantial additional sources of polluted runoff. Therefore, the project would have no impact on existing storm drain capacities or water quality, and mitigation measures would not be required.

(f) Otherwise substantially degrade water quality?

The proposed project would result in less than significant impacts to hydrology and water quality in relation to substantial degradation of water quality. The closest drainage is the concrete-lined channel of the Los Angeles River, approximately 0.5 miles east of the project site. The proposed project would not include direct removal, filling, hydrological interruption, or other alterations to the Los Angeles River. Project construction activities would occur in accordance with the Los Angeles Building Code Sections 91.7000 through 91.7016, which require necessary permits, plan checks, and inspections to reduce the effects of sedimentation and erosion. Additionally, project construction would occur in accordance with standard procedures established by the RWQCB and project compliance with the City's SUSMP requirements. Therefore, the project would have a less than significant impacts relative to degradation of water quality, and mitigation measures would not be required.

(g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

The proposed project would result in no impacts to hydrology and water quality in relation to placement of housing within a 100-year flood hazard area. No housing is proposed as part of the project. Therefore there would be no impact, and mitigation measures would not be required.

(h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

The proposed project would result in no impacts to hydrology and water quality in relation to placement of structures within a 100-year flood hazard area. The project site is not located within a 100-year flood plain or other flood susceptible area (Figure 3.10.2-4). Therefore there would be no impact, and mitigation measures would not be required.

(i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

The proposed project would result in no impacts to hydrology and water quality in relation to the failure of a levee or dam. The project site is not located within a 100- or 500-year floodplain (Figure 3.10.2-4). The project site is not located within a delineated potential inundation area resulting from the failure of a levee or dam, as shown by the City of Los Angeles Safety Element Inundation and Tsunami Hazard Areas map. Therefore there would be no impact, and mitigation measures would not be required.

(j) Inundation by seiche, tsunami, or mudflow?

The proposed project would result in no impacts to hydrology and water quality in relation to the inundation by seiche, tsunami, or mudflow. The proposed project site is not located within inundation and tsunami hazard areas delineated in the City of Los Angeles Safety Element. Therefore there would be no impact, and mitigation measures would not be required.

3.10.4 Cumulative Impacts

The potential for cumulative impacts was evaluated in relation to each of the ten questions in the State CEQA Guidelines for hydrology and water quality. The proposed project would result in no impacts to hydrology and water quality in relation to eight of the ten CEQA issue areas. Compliance with the requirements of the NPDES Permit and the SUSMP would ensure that the construction and operation of the project would not violate any water quality or waste discharge requirements. In addition, project construction would occur in accordance with standard procedures established by the RWQCB and project compliance with the City's SUSMP requirements, reducing potential impacts to substantially degrading water quality to below the level of significance. Related projects within the City of Los Angeles would also be required to conform to the requirements of the NPDES Permit and the City's SUSMP requirements. Therefore, the potential impacts of the proposed project, when considered with the impacts of past, present, and reasonably foreseeable future projects, would not contribute to cumulative impacts to hydrology and water quality, and mitigation measures would not be required.

3.10.5 Mitigation Measures

Mitigation measures would not be required.

3.10.6 Level of Significance after Mitigation

Impacts would be less than significant.

3.11 Land Use and Planning

This section of the Environmental Impact Report (EIR) analyzes potential impacts to land use and planning from construction, operation, and maintenance of the proposed Forecourt and Esplanade Improvements Project (proposed project). The analysis of land use and planning consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

Land use and planning was evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines). Land use and planning within the project site were evaluated in relation to the City of Los Angeles General Plan and zoning code; Central City Community Plan, Central City North Community Plan (CCNCP); Alameda District Specific Plan (ADP); City of Los Angeles Municipal Code; Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS); Los Angeles City Bicycle Plan 2010; City of Los Angeles Department of Transportation (LADOT) Strategic Plan – Great Streets for LA; Project Restore Civic Crossroads Plan; a review of U.S. Fish and Wildlife Service and California Department of Fish and Wildlife (CDFW) data for Habitat Conservation Plans (HCPs) and Natural Community Conservation Plan (NCCPs); as well as a review of related literature and geographic information systems (GIS) data for the project site.

3.11.1 Regulatory Setting

Federal

There are no federal policies and regulations that supersede state and local policies and regulations for land use, planning, and zoning within the project area.

State

Section 2800–2835, Natural Community Conservation Planning Act of 1991, as Amended

The Natural Community Conservation Planning Act of 1991, as amended in 2003 (California Fish and Game Code Section 2800-2835) established the Natural Community Conservation Planning program for the protection and perpetuation of the state's biological diversity. The CDFW established the program in order to conserve natural communities at the ecosystem level while accommodating compatible land use. An NCCP identifies and provides for the regional or area-wide protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. The CDFW provides support, direction, and guidance to participants in order to ensure that NCCPs are consistent with the state Endangered Species Act.

Local

SCAG 2016-2040 RTP/SCS

SCAG developed a land use distribution pattern supported by land use strategies that are included in the SCS portion of the 2016-2040 RTP/SCS. This plan is updated to respond to updated land use and reflect changes in the transportation network. The SCS outlines a plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The SCS focuses the majority of new housing and job growth in high quality transit areas (HQTAs) and other opportunity areas in existing urbanized areas and suburban town centers and opportunity areas, resulting in an improved jobs-housing balance and more opportunity for infill, mixed-used, and/or transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation demand management measures.

City of Los Angeles

Citywide General Plan Framework

The Citywide General Plan Framework, adopted by the City of Los Angeles, classifies Los Angeles Union Station and the surrounding area as a regional center. The Framework is a guiding document and neither overrides nor mandates changes to the community plans or specific plans. The Citywide General Plan Framework Element is a citywide, comprehensive growth strategy that provides the overall guiding vision for Los Angeles. It targets residential growth along boulevards, corridors, and cluster developments around community centers and high activity centers. The General Plan Framework defines a regional center as:

> *a focal point of regional commerce, identity and activity and contains a diversity of uses such as corporate and professional offices, residential, retail, commercial malls, government buildings, major health facilities, major entertainment and cultural facilities and supporting services. Generally different types of Regional Centers will fall within the range of floor area ratios from 1.5:1 to 6.0:1. Some will only be commercially oriented; others will contain a mix of residential and commercial uses. Generally, Regional Centers are characterized by 6-to 20-stories (or higher). Regional Centers are usually major transportation hubs.*

Central City Community Plan

The Central City Community Plan was adopted on December 15, 2000. The Central City Community Plan is the City's General Plan guidance for land use and circulation for the areas surrounding the project site, west of Alameda. The Draft Downtown Community Plan 2040 (DTLA 2040) serves as an update for both the Central City Community Plan as well as the Central City North Community Plan. The DTLA 2040

provides a collective vision for Downtown's future including policies, plans, and programs that align with the city's long-term priorities.

The Central City Community Plan is one of the 35 community plans in the City of Los Angeles. It constitutes the Land Use Element of the General Plan for this portion of the City and is required by State law. The Community Plan was developed in the context of promoting a vision of the Central City area as a community that:

- Encourages traditional and non-traditional sources of open space by recognizing and capitalizing on linkages with transit, parking, historic resources, cultural facilities, and social services programs.
- Improves Downtown's pedestrian environment in recognition of its important role in the efficiency of Downtown's transportation and circulation systems and in the quality of life for its residents, workers, and visitors.

The Plan includes land use policies and programs, coordination opportunities for public agencies and urban design policies, standards, and guidelines. Some of the key policies related to transportation and circulation include (paraphrased):

- Keeping downtown as the focal point of the regional mobility system by encouraging rail connections and HOV lanes to serve downtown travelers;

Preserve and enhance Central City's primary pedestrian-oriented streets and sidewalks and create a framework for the provision of additional pedestrian friendly streets and sidewalks which complement the unique qualities and character of the communities in Central City.

Central City North Community Plan

The CCNCP was adopted in 2000, and is the City's General Plan guidance for land use and circulation for the areas surrounding the project site, east of Alameda. However the DTLA 2040 is the latest update to both the Central City and Central City North Community Plans. The DTLA 2040 will provide a collective vision for Downtown's future including policies, plans, and programs that align with the city's long-term priorities.

The CCNCP is one of the 35 community plans in the City of Los Angeles. It constitutes the Land Use Element of the General Plan for this portion of the city and is required by state law. The CCNCP was developed in the context of promoting a vision of the Central City North area as a community that:

- Maximizes the development opportunities of future transit systems while minimizing any adverse impacts.

The Plan includes land use policies and programs, coordination opportunities for public agencies and urban design policies, standards, and guidelines. Some of the key policies related to transit and transit-oriented development include (and paraphrased):

- Encourage local and express bus service, park-and-ride facilities, safe and attractive transit stops and programs aimed at enhancing the mobility of senior citizens, disabled persons, and transit-dependent populations.
- Provide Transportation System Management (TSM) including strategies for limiting vehicle trip generation from new development and development incentives such as increased density and/or reduced on-site parking requirements for projects that exceed minimum trip reduction performance. TSM also encourages financial incentives such as reducing fees for the City's Business Regulation License and developing "an access guide to Central City North identifying locations served by transit (particularly regional transit generating out of Union Station)."
- Require the installation of sidewalks with all new roadway construction and significant reconstruction of existing roadways.

Draft Downtown Community Plan 2040

The City of Los Angeles is currently in the process of updating the Central City and Central City North Community Plans as part of DTLA 2040. The Downtown Community Plan Updates will be implemented by the new Downtown Code, a toolkit of new zoning regulations customized for the urban core of Los Angeles. The City will be reviewing existing policies and programs and revising them as necessary. The intent is to study on-the-ground conditions and emerging development trends since the plan was last revised and to determine desirable future growth patterns. The update will focus on land use, and related mobility and urban design strategies that reinforce Downtown's strong urban context.

The updated Community Plans will provide City departments, elected officials, developers, business owners and homeowners with an accurate guide to future development. Recommended changes to Community Plans and their policies and programs will be shaped by public input and collaboration with City departments, and other governmental agencies that provide public services and facilities. The primary objective is to always have a community plan that is up-to-date.

The following core principles related to the proposed project represent the long-term priorities for the Downtown Community Plans:[1]

- Support and sustain Downtown's ongoing revitalization
- Promote a transit, bicycle, and pedestrian friendly environment
- Strengthen neighborhood character
- Create linkages between districts

Alameda District Specific Plan

The Alameda District Community Plan (ADP) provides land use and development regulations for the project site. The intent of the ADP is to provide continued and expanded development of the site both

[1] City of Los Angeles. 2017. DTLA 2040. Available at: http://www.dtla2040.org/

as a major transit hub for the region, and as a mixed-use development providing office, hotel, retail, entertainment, tourism, residential and related uses within the Specific Plan area, in conformance with the goals and objectives of local and regional plans and policies.[2]

Section 12.16.2 of the City of Los Angeles Municipal Code regarding the ADP contains the following requirements:[3]

> *B. Use. No building, structure or land shall be used and no building or structure shall be erected, structurally altered, enlarged or maintained, except as permitted by Sections 6 and 7 of the Alameda District Specific Plan Ordinance.*
>
> *C. Area. No building or structure nor the enlargement of any building or structure shall be erected or maintained unless the yard, area and loading spaces required by Section 7 of the Alameda District Specific Plan Ordinance are provided and maintained in connection with the building, structure or enlargement.*

Section 7 of the ADP contains the following requirements for open space and pedestrian connections[4]

> ***D. Open Space, Pedestrian Connections and Landscape Regulations***
>
> ***1. Open Space***
>
> *a. General*
>
> *1) Open Space within the ADP is addressed on a Specific Plan area-wide basis and may be provided in the form of courtyards, plazas or other larger gathering areas on the property. As a result, it is not required to be provided on a Project by Project basis.*
>
> ***2. Pedestrian Connections***
>
> *a. On-site Pedestrian Connections shall be designed to provide linkage with Chinatown, El Pueblo de Los Angeles (Olvera Street and Pico/Granier block) and between the Union Station Site and the Terminal Annex Site in compliance with Section 5A5. Pedestrian Connections shall be constructed with lighting, landscaping, hardscape improvements and directional signs to encourage pedestrian use. Where bus stops are located along Pedestrian Connections, appropriate landing areas shall be provided for pedestrians boarding or disembarking buses.*

[2] City of Los Angeles. Accessed 1 August 2017. Alameda District Specific Plan. Available at: http://planning.lacity.org/complan/specplan/pdf/Alameda.pdf

[3] City of Los Angeles. City of Los Angeles Municipal Code. August 6, 1996. Available at: http://library.amlegal.com/nxt/gateway.dll/California/lapz/municipalcodechapteriplanningandzoningco/chapterigeneralprovisionsandzoning/article2specificplanning-zoningcomprehen/sec12162adpalamedadistrictspecificplanzo?f=templates$fn=default.htm$3.0$vid=amlegal:lapz_ca$anc=JD_12.16.2.

[4] City of Los Angeles. Alameda District Specific Plan. [1996] Amended 2000. Available at: http://planning.lacity.org/complan/specplan/pdf/alameda.pdf

b. Meandering or serpentine sidewalks shall be permitted as Pedestrian Connections for public sidewalk purposes in lieu of City of Los Angeles standard sidewalks, and may be located within the dedicated right-of-way. Adjacent to Cesar Chavez and Alameda Streets, easements for public sidewalk purposes shall be granted over private property, as necessary, to accommodate the design and construction of meandering sidewalks.

City of Los Angeles Mobility Plan 2035

The City of Los Angeles updated the Transportation Element of the City's General Plan, now referred to as Mobility Plan 2035 or MP 2035, in 2015, to reflect policies and programs that will lay the policy foundation for safe, accessible, and enjoyable streets for pedestrians, bicyclists, transit users, and vehicles throughout the City of Los Angeles. The Mobility Plan 2035 achieves a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation.[5]

Project Restore Civic Crossroads Plan

Project Restore is a public-private partnership, a state-registered non-profit organization 501(c)(3) committed to the historic restoration and preservation of the civic integrity of the City of Los Angeles. It is a coalition of community, labor and industry representatives, preservationists and caring citizens committed to rehabilitating the buildings, monuments and public spaces which define the cultural heritage of communities throughout the City of Los Angeles. Project Restore works in close cooperation with the elected leadership of the City of Los Angeles and with the public employers who construct, operate, and maintain its facilities.[6]

As part of the effort towards the revitalization of the Civic Center and Downtown Los Angeles, the Project Restore Civic Crossroads Plan (Plan) identifies opportunities and projects related to planned development projects and initiatives. The Plan includes recommendations for El Pueblo, directly west of Los Angeles Union Station, Civic Center, and the historic core area of the City. The Plan proposes to update the Ten-Minute Diamond Plan , which was first suggested in the 1997 Civic Center Master Plan, in order to place government workers within a 10-minute-maximum walk away from City Hall, thus improving communication between departments and boosting pedestrian activity. The diamond also connected the Civic Center to many other neighborhoods in DTLA including Little Tokyo, Bunker Hill, Union Station.

[5] City of Los Angeles. Accessed 1 August 2017. Mobility Plan 2035. Available at: http://planning.lacity.org/documents/policy/mobilityplnmemo.pdf

[6] Project Restore. Accessed 1 August 2017. Available at: http://projectrestore.lacity.org/html/about/whoweare.htm

Connect US Action Plan (formerly LA Union Station and 1st/Central Linkages Study)

The Connect US Action Plan (formerly LA Union Station and 1st/Central Station Linkages Study) was developed to improve historical and cultural connections in downtown Los Angeles by enhancing pedestrian and bicycle travel options through and between communities. At the center of the study is access to Los Angeles Union Station, a regional transportation hub for numerous rail, bus and shuttle services, and the future Regional Connector station at 1st/Central.

The Connect US Action Plan includes a neighborhood-level assessment of arterial and collector streets, with an emphasis on bicycle and pedestrian mobility. The study is centered around a community-driven process to identify implementable public improvements that can create connections and pathways between and through downtown neighborhoods. The Plan provides a community-prioritized list of improvement projects to strengthen bicycle and pedestrian (active transportation) connectivity between communities, and destinations and public transit.

The Connect US Action Plan objectives are to:

- Create connections between Los Angeles Union Station and the cultural/historic sites in the surrounding neighborhoods by means of a clear primary route
- Develop a plan for enhancing access on foot or bicycle between the 1st/Central Station, Little Tokyo and the Arts District
- Improve pedestrian and bicycle linkages to/from Los Angeles Union Station to the destinations within each neighborhood and between neighborhoods
- Promote improvements that convey the unique identity of each neighborhood and street
- Create a sustainable Action Plan for implementation that has clear jurisdictional responsibility[7]

3.11.2 Affected Environment/Existing Conditions

Established Communities

The project site is located in the City of Los Angeles, in the northern portion of the downtown area. The proposed project is located north of State Route 101 (Santa Ana Freeway). The proposed project is bounded by Cesar Chavez Avenue on the north, Los Angeles Union Station to the east, Arcadia Street to the south, and North Los Angeles Street to the west. The Mozaic Union Station Apartments are located north of the project site and consist of 272 existing housing units including one- and two-bedroom apartments. The number of residents living in these apartments varies depending on occupancy level. The estimated number of residents occupying the Mozaic Union Station Apartments is 687 based on the

[7] Los Angeles Metropolitan Transportation Authority, Southern California Association of Governments, California Department of Transportation, and City of Los Angeles. 2015. *Connect US Plan Action Plan (formerly LA Union Station and 1st/Central Linkages Study)*. Prepared by: CITYWORKS DESIGN with 8-80 Cities, Patricia Smith ASLA, AICP, Fehr and Peers, Deborah Murphy Urban Design + Planning, Arellano Associates, KPFF, Lenax Construction Services.

type of unit and a 95 percent occupancy level. These are the only residences located near the project site.

Applicable Land Use Plan, Policy, or Regulation of an Agency with Jurisdiction over the Project

Approximately 28 percent of the proposed project is located within the ADP (Figure 3.11.2-1, *Alameda District Specific Plan*).[8] The ADP was adopted in 1996, when the area was under different ownership. The ADP area is located north of the Civic Center. The ADP area is approximately 70 acres in size and consists of two main components: the 52-acre Los Angeles Union Station property (except for the Metropolitan Transportation Authority Gateway building and the Patsouras Bus Plaza) and the 18-acre property referred to as the Terminal Annex property. The CCNCP[9] designates the area as a regional center, and the ADP established and applieda special ADP zone to the area. Cesar E. Chavez Avenue bisects the two properties. The build-out phase of the ADP identified a build-out of approximately 10,862,000 square feet of commercial office, government office, hotel and conference center, entertainment, residential, retail, and museum development. The build-out was planned to be completed in two phases, and developed over a period of two decades. The Los Angeles Union Station property site was allocated approximately 6.5 million square feet of the ADP development rights.

The project site is almost equally split between the CCNCP and the Central City Community Plan.[10][11] The CCNCP consists of approximately 2,005 acres and is located adjacent to downtown Los Angeles. It is surrounded by the communities of Silverlake-Echo Park, Central City, Boyle Heights, and Northeast Los Angeles. The Central City Community Plan Area is the second smallest community plan area, representing less than 1 percent of the land, in the City of Los Angeles (approximately 2,161 acres or 3.38 square miles). Since this area is the governmental, financial, and industrial hub of Los Angeles, land is primarily dedicated to these uses. Consequently, this area has a smaller residential population in comparison with the rest of the city, though dwelling units and resident population are growing as people find a renewed interest in urban living and existing vacant and often historic commercial and industrial buildings are being converted to residential uses (Figure 3.11.2-2, *General Plan Land Use Designation*).[12]

The General Plan land use designations for the project site are Regional Center Commercial, Public Facilities, and Open Space. The zoning designation of the project site are ADP-RIO, Alameda District Specific Plan, PF – Public Facilities, and OS – Open Space (Figure 3.11.2-3, *Zoning*). Approximately 81 percent (10.5 of the total of 13.4 acres) of the proposed project is located within public right-of-way. As a result, these areas do not have a General Plan land use or zoning designation.

[8] City of Los Angeles. Amended 22 September 2000. *Alameda District Plan*. Los Angeles, CA.

[9] City of Los Angeles. Adopted 15 December 2000. *Central City North Community Plan*. Los Angeles, CA.

[10] City of Los Angeles. Adopted 15 December 2000. *Central City North Community Plan*. Los Angeles, CA.

[11] City of Los Angeles. Adopted 8 January 2003. *Central City Community Plan*. Los Angeles, CA.

[12] City of Los Angeles. Adopted 8 January 2003. *Central City Community Plan*. Los Angeles, CA.

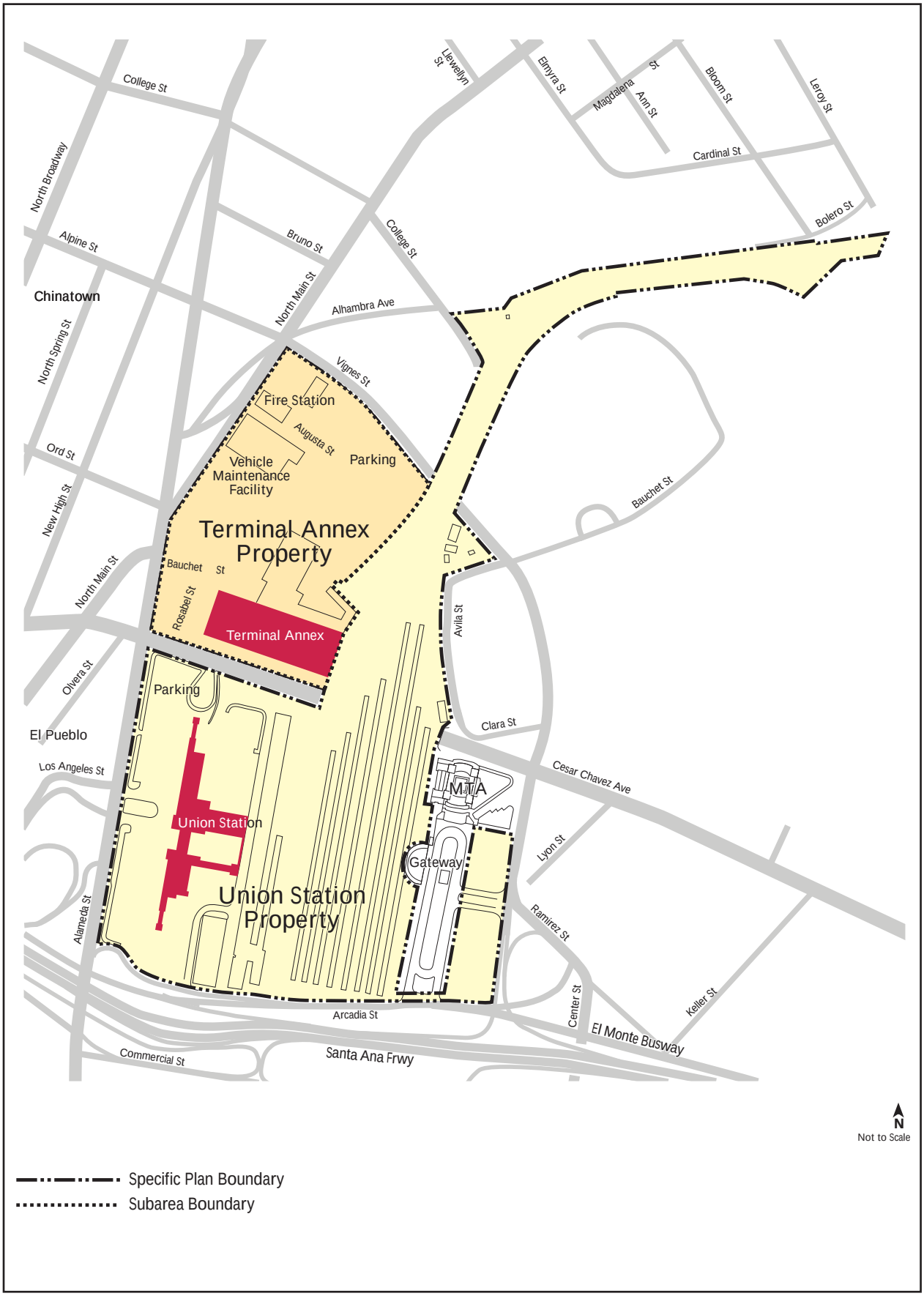


Figure 3.11.2-1. Alameda District Specific Plan

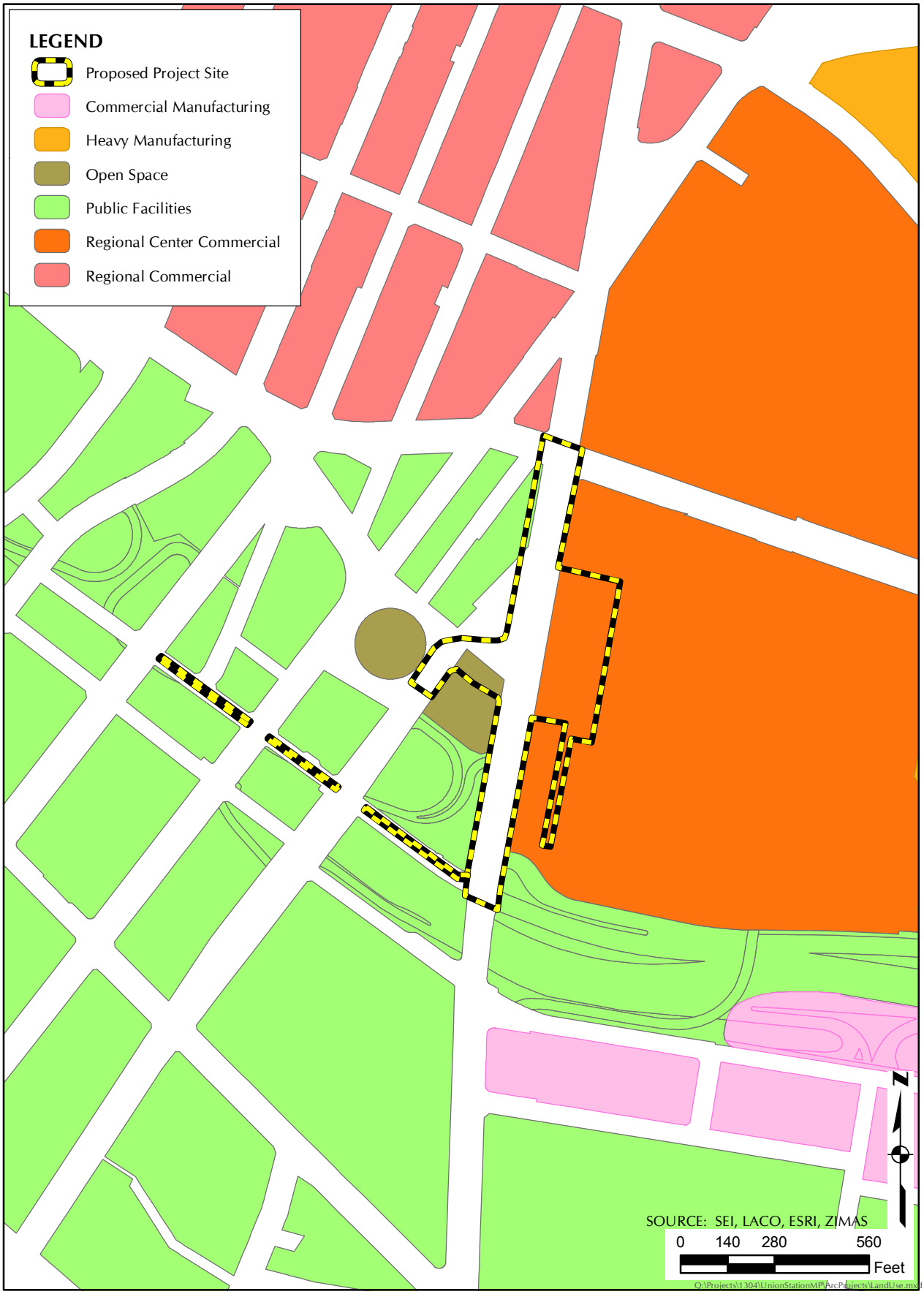


Figure 3.11.2-2. General Plan Land Use Designation

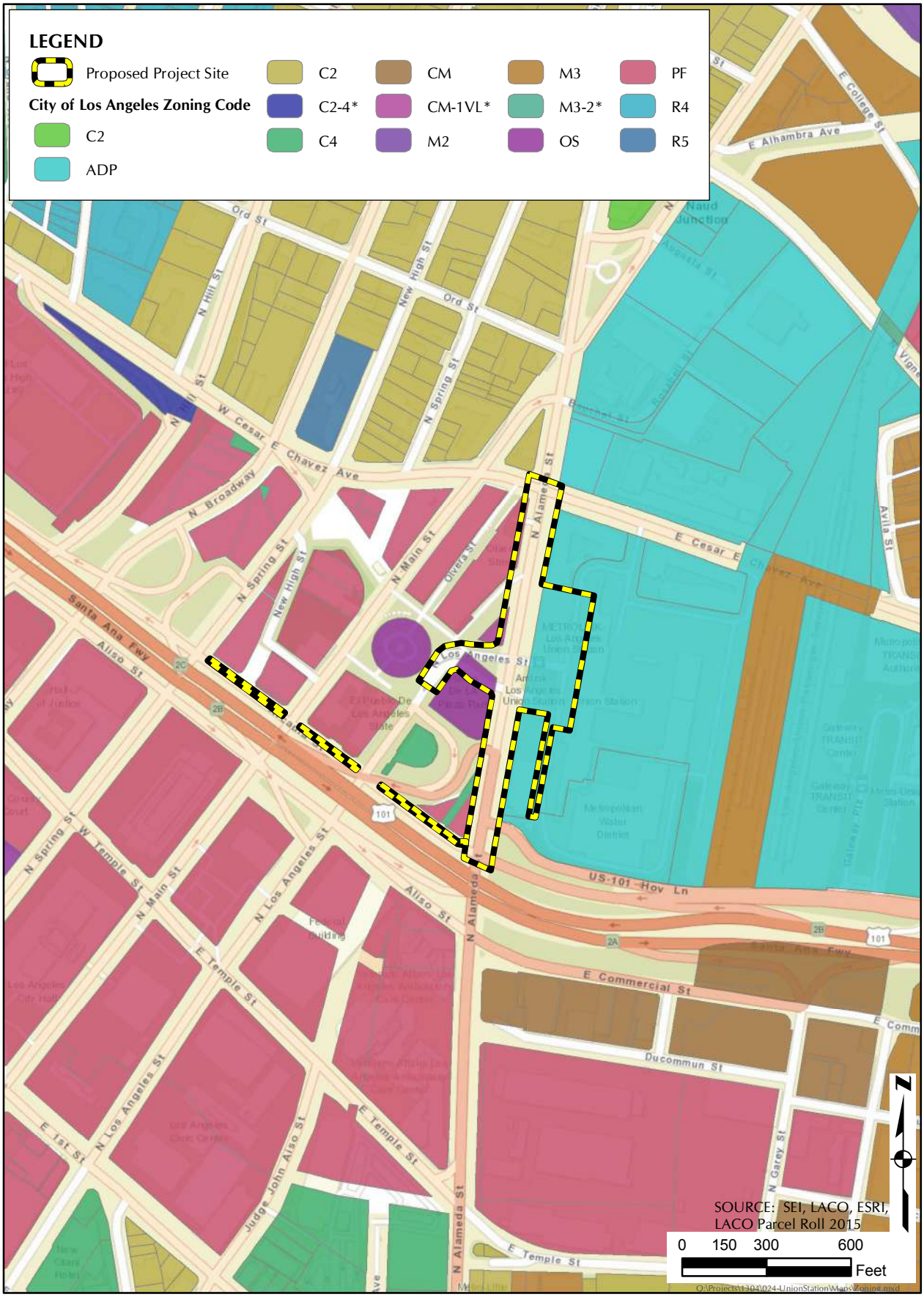


Figure 3.11.2-3. Zoning

Los Angeles Union Station is characterized by three zoning designations: ADPP, OS, and PF (Table 3.11.2-1, *Existing Zoning*).

TABLE 3.11.2-1
EXISTING ZONING

Zoning Designation	Acres	Percentage
ADP – Alameda District Specific Plan	2.2	33%
OS – OpenSpace	0.25	4%
PF – Public Facilities	0.16	2%
Right-of-Way (zoning not applied)	4.11	61%
Total*	6.71	100%

NOTE: *Total does not include right-of-way.

An additional six zoning designations occur within a 0.25-mile radius of the project site: C2, C4, CM, M3, R4, and R5. Table 3.11.2-2, *Zoning within 0.25 Mile of Project Site*, provides a summary of zoning designations surrounding the proposed project.[13] The majority of the surrounding area is made up of PF, ADP, and C2 zoning.

TABLE 3.11.2-2
ZONING WITHIN 0.25 MILE OF PROJECT SITE

Zoning Designation	Acres	Percentage
ADP – Alameda District Specific Plan	56.7	28%
C2 - Commercial	22.0	11%
C4 - Commercial	4.7	2%
CM – Commercial Manufacturing	8.0	4%
M3 – Heavy Industrial	9.2	5%
OS - OpenSpace	5.8	3%
PF – Public Facilities	92.7	46%
R4 – Multiple Dwelling	0.2	0.10%
R5- Multiple Dwelling	1.3	1%
Total*	200.6	100%

NOTE: *Total does not include right-of-way.

General Plan land use designations within a 0.25-mile radius of the project site include Regional Center Commercial, Regional Commercial, Commercial Manufacturing, Heavy Manufacturing, Public Facilities, and Open Space (Figure 3.11.2-3).

[13] City of Los Angeles. ZIMAS. Accessed 3 May 2015. Available at: http://zimas.lacity.org/

Habitat Conservation Plans and Natural Community Conservation Plans

HCPs and NCCPs were evaluated to determine applicability of any adopted or proposed HCPs or NCCPS in the proposed project area. The boundaries of HCPs/NCCPs were reviewed and compared to the nine U.S. Geological Survey 7.5-minute topographic quadrangles surrounding the proposed project area to determine their relevance. There are no existing or proposed HCPs or NCCPs with provisions applicable to the proposed project.

3.11.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of three questions when addressing the potential for significant impacts to land use and planning. Would the proposed project:

(a) Physically divide an established community?

The proposed project would not result in impacts to land use and planning through the physical division of an established community. The proposed project entails the replacement of current short-term parking with a forecourt with outdoor seating, the reconfiguration of Alameda Street, widening of the crosswalk leading to the entrance to the El Pueblo Historic Park, and the closure of the north entrance to Los Angeles Union Station. The nearest residential uses to the proposed project are the Mozaic Apartments located adjacent to the project site on the southeast corner of East Cesar E Chavez Avenue and North Alameda Street. The proposed project would provide an open space amenity and enhanced pedestrian and cycling path of travel for residents, workers, and visitors, including the transit population, in the project area. The improvements are aligned with the existing regional and local transportation network, which facilitates multi-modal movement through the neighborhood. Therefore, the proposed project would result in no impact to land use and planning resulting from a physical division to the established community.

(b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project would not result in impacts to land use and planning in relation to a conflict with adopted or proposed land use plans, policies, or regulations.

SCAG 2016-2040 RTP/SCS

The proposed project supports the RTP/SCS goal of integrating the transportation network and related strategies with an overall land use pattern by including elements that encourage pedestrian and alternative transportation access to LAUS, a regional transit hub. The proposed project supports the overall land use development pattern encouraged by the SCS, and complements the proposed transportation network that emphasizes system preservation, active transportation, and transportation

demand management measures by redesigning the streetscape around LAUS to encourage more active transportation options.

City of Los Angeles

The proposed project is consistent with the City of Los Angeles General Plan, zoning code, and Landscape Ordinance.[14] The proposed project is consistent with the types of open space, pedestrian, and landscape regulations that allow for the development of open space plazas. The proposed project does not propose the construction of any buildings or structures. . The proposed project improvements are consistent with the Alameda District Specific Plan zoning and the Regional Center Commercial General Plan Land Use designation. Therefore, the proposed project would not result in significant impacts to land use and planning in relation to a conflict with adopted or proposed land use plans, policies, or regulations.

Mobility Plan 2035

The proposed project is consistent with the goals and objectives outlined in the Mobility Plan 2035. The mobility plan aims to incorporate complete streets that are conducive to all Angelenos including motorists, pedestrians, bicyclists, and users of public transportation. The proposed project would decrease vehicle access lanes and increase accessibility for those Angelenos interested in all forms of active transportation.

Plan for a Healthy Los Angeles

The proposed project is consistent with the objectives detailed in the Plan for a Healthy Los Angeles. The Plan for a Healthy Los Angeles includes a component with the stated goal of a complete neighborhood that is capable of meeting residents' basic needs. Of those needs outlined in a vision of a healthy Los Angeles, a critical component is a community design that promotes healthy living for people of all ages, income levels, cultural backgrounds, and geographies. The proposed Project would allow for increased active transportation which is a healthier alternative to driving.

Central City Community Plan

The proposed project helps to meet the Central City Community Plan objectives regarding the creation of new open space, and fostering physical and visual links between a variety of open spaces and public spaces Downtown by redesigning the streetscape around LAUS to encourage more active transportation, and to better link Union Station with El Pueblo. In addition, proposed project includes

[14] City of Los Angeles Landscape Ordinance. [1996] Amended 2005. Ordinance No. 170,978. Available at: http://cityplanning.lacity.org/Forms_Procedures/landsc%20guidelines%204-05.pdf

the creation of a new public plaza at Union Station, further encouraging the addition of new open space Downtown.[15]

Central City North Community Plan

The proposed project supports and is consistent with the goals and policies of the CCNCP of maximizing the development opportunities of future transit systems while minimizing any adverse impacts; encouragement of local and express bus service, park-and-ride facilities, safe and attractive transit stops and programs aimed at enhancing the mobility of senior citizens, disabled persons, and transit-dependent populations; the provision of Transportation System Management (TSM) including strategies for limiting vehicle trip generation from new development; and requiring the installation of sidewalks with all new roadway construction and significant reconstruction of existing roadways.

DTLA 2040

The proposed project supports and is consistent with core principles of the DTLA 2040 to support and sustain Downtown's ongoing revitalization, promote a transit, bicycle, and pedestrian friendly environment, strengthen neighborhood character, and create linkages between districts.

ADP

The proposed project is consistent with the intent of the ADP to provide continued and expanded development of the area as a major transit hub for the region by redesigning the streetscape to encourage enhanced pedestrian and active transportation access to LAUS. By developing a new public plaza, the proposed project is consistent with the open space and pedestrian connectivity objectives in the ADP.

City of Los Angeles Mobility Plan 2035

The proposed project helps to meet the policy objectives of the City of Los Angeles Mobility Plan 2035 for safe, accessible, and enjoyable streets for pedestrians, bicyclists, transit users, and vehicles throughout the City of Los Angeles by enhancing the streetscape around LAUS. The widened sidewalks, pedestrian lighting, and redesigned street crossing in front of Union Station will encourage active transportation to and around the station.

Vision Zero Los Angeles 2015-2025

The proposed project is consistent with the mission of the Vision Zero Los Angeles 2015-2025 initiative. With the stated goal of zero traffic deaths by 2025, the proposed project helps achieve this goal. By facilitating alternatives to driving, enhancing the safety and quality of pedestrian and bicycle connections around LAUSD, narrowing the roadway and reallocating roadway area for the expanded

[15] City of Los Angeles. Accessed 1 August 2017. Central City Community Plan, Objectives 4-1 through 4-4. Available at: http://cityplanning.lacity.org/complan/pdf/CCYCPTXT.PDF

pedestrian and bicycling lanes, the proposed project is aligned with the goals of Vision Zero Los Angeles 2015-2025.

Project Restore Civic Crossroads Plan

The proposed project is consistent with the Project Restore Civic Crossroads Plan as it will encourage revival of a vibrant, pedestrian-friendly neighborhood with linked public spaces for the El Pueblo area.

The Connect US Action Plan

The proposed project is consistent with the Connect US Action Plan as it will create connections between Los Angeles Union Station and the cultural/historic sites in the surrounding neighborhoods, improve bicycle and pedestrian access across all transit systems, improve regional connectivity to bus services, expand the network of bus services and dedicated bus facilities, improve regional connectivity to bus services, create and maintain an interconnected and effective bicycle network, and incorporate safety for pedestrians into all street designs and redesign.

(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The proposed project would not result in impacts to land use and planning in relation to a conflict with any applicable HCP or NCCP. The proposed project is located in a heavily urbanized area, and there are no HCPs or NCCPs with boundaries that intersect the project site. As a result, there are no HCPs or NCCPs with provisions applicable to the proposed project.

3.11.4 Cumulative Impacts

Eleven development projects are located half a mile of the proposed project, including Metro projects, residential development, commercial development, bus stop improvements, active transportation corridors, mixed-use projects, and more. Of these, none are expected to result in significant impacts to land use and planning. All of these projects would be required to be consistent with the City Zoning Code, General Plan, and development regulations as with the proposed project.

The State CEQA Guidelines recommend the consideration of three questions when addressing the potential for significant cumulative impacts to land use and planning. Would the proposed project:

(a) Physically divide an established community?

The proposed project would have no impact to the division of an established community. Therefore, it would make no contribution to cumulative impacts.

(b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project would have no impact with regard to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, it would make no contribution to cumulative impacts.

(c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The proposed project would have no impact with regard to conflict with any applicable HCP or NCCP. Therefore, it would make no contribution to cumulative impacts.

3.11.5 Mitigation Measures

No mitigation measures would be required.

3.11.6 Level of Significance after Mitigation

There would be no impact to land use and planning.

3.12 Mineral Resources

This section of the Environmental Impact Report (EIR) analyzes potential impacts to mineral resources from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The analysis of mineral resources consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

3.12.1 Regulatory Setting

Federal

There are no federal policies and regulations that supersede state and local policies and regulations for mineral resources within the project site.

State

Surface Mining and Reclamation Act (SMARA) of 1975[1]

The SMARA (Public Resources Code [PRC] 2710–2796) requires that the State Department of Mines and Geology Board map areas throughout the state that contain regionally significant mineral resources. Construction aggregate resources (sand and gravel) deposits were the first commodity selected for classification by the Board. Once mapped, the Mines and Geology Board is required to designate for future use those areas that contain aggregate deposits that are of prime importance in meeting the region's future need for construction-quality aggregates. The primary objective of SMARA is for each jurisdiction to develop policies that would conserve important mineral resources, where feasible, that might otherwise be unavailable when needed. SMARA requires that once policies are adopted, local agency land use decisions must be in accordance with its mineral resource management policies. These decisions must also balance the mineral value of the resource to the market region as a whole, not just their importance to the local jurisdiction. The federal Surface Mining Control and Reclamation Act of 1977 is less comprehensive and less restrictive than the state act. Therefore, the California act is the primary regulator of surface mining within the state. However, mine operators must comply with federal, state and local regulations.

[1] Surface Mining and Reclamation Act of 1975 (SMARA), Division of Mine Reclamation. Accessed 12 June 2017. Available at: http://www.conservation.ca.gov/dmr

Government Code Section 65302(d)[2]

Government Code Section 65302(d) states that a conservation element of the general plan shall address minerals and other natural resources.

Local

City of Los Angeles Municipal Code and General Plan

The City is responsible for implementing the California Surface Mining and Reclamation Act requirements, as they apply to Los Angeles. It does so primarily through land use controls and permit issuance and monitoring. To comply with SMARA, Los Angeles adopted (1975) the 'G' Surface Mining supplemental use provisions (LAMC Section 13.03). Subsequent amendments have brought the city's provisions into consistency with new state requirements. The 'G' provisions are land use, not mineral conservation regulations. They regulate the establishment of sand and gravel districts, extraction operations, mitigation of potential noise, dust, traffic, and other potential impacts, as well as post-extraction site restoration. Other conditions may be imposed by the city if deemed appropriate.

SMARA requires that the general plan identify the Mineral Resource Zone-2 (MRZ-2) sites and contain resource management provisions. In addition to this element (Exhibit A), MRZ-2 sites are identified in two community plan elements of the city's general plan, the Sun Valley and the Sunland-Tujunga-Lake View Terrace-Shadow Hills-East La Tuna Canyon community plans. All three elements contain resource management provisions. It is the city's policy that construction materials, such as concrete and rock, be recycled to reduce the amount of solid waste that goes into local landfills, thereby extending the life of the landfills. Recycling has a secondary benefit of reducing the demand for sand and gravel and produces recycled materials, which can be substituted for the natural materials.

Section 18 of the Conservation Element of the City of Los Angeles General Plan[3] contains the following policies related to the protection and extraction regulation of mineral resources located within the City:

> **Objective:** conserve sand and gravel resources and enable appropriate, environmentally sensitive extraction of sand and gravel deposits.

[2] Government Code Section 65302(d), ARTICLE 5. Authority for and Scope of General Plans. Available at: http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=GOV&sectionNum=65302

[3] City of Los Angeles Department of City Planning. Adopted September 2001. Los Angeles General Plan, Conservation Element.

Policy 1: continue to implement the provisions of the California Surface Mining and Reclamation Act (Public Resources Code Section 2710 et seq.) so as to establish extraction operations at appropriate sites; to minimize operation impacts on adjacent uses, ecologically important areas (e.g., the Tujunga Wash) and ground water; to protect the public health and safety; and to require appropriate restoration, reclamation and reuse of closed sites.

Program 1: administration and periodic updating of the 'G' Surface Mining District overlay zone provisions (LAMC 13.03).

Responsibility: Departments of Building and Safety and City Planning.

Program 2: community plan identification of state designated Mineral Resources Zone-2 sites and including of related resource management provisions.

Responsibility: Department of City Planning.

Policy 2: continue to encourage the reuse of sand and gravel products, such as concrete, and of alternative materials use in order to reduce the demand for extraction of natural sand and gravel.

Program: recycling of construction materials.

Responsibility: Bureau of Sanitation and city agencies that conduct or oversee construction projects.

3.12.2 Affected Environment/Existing Conditions

Regionally Important Mineral Resources

Mineral Resource Zones

According to the California Geological Survey (CGS), the project site is located within a designated MRZ-3.[4] MRZ-3 zones contain known mineral occurrences of undetermined mineral resource significance (Figure 3.12.2-1, *Mineral Resources Zones*). The project site does not lie within a designated Mineral Resources Zone-2 (MRZ-2). MRZ-3 designation does not included known significant mineral resources and is not included in the resource management provisions under the Conservation Element of the City of Los Angeles General Plan. The City, through the Land Use Element of the City of Los Angeles General Plan, has designated the proposed project site as regional commercial and heavy industrial, and the surrounding properties are designated regional commercial and public facilities.

[4] California Division of Mines and Geology. Accessed 26 April 2016. Classification of Sand and Gravel Resources Area - San Fernando Valley Production-Consumption Region of the Greater Los Angeles Metropolitan Area. Available at: ftp://ftp.conservation.ca.gov/pub/dmg/pubs/sr/SR_143/PartII/SR_143_PartII_Text.pdf

Active and Abandoned Mines

According to the National Minerals Information Center, there are 28 active mines in Los Angeles County (1 common clay and shale mines, 3 crushed stone mines, 1 dimension stone mine, 2 perlite mines, 7 sulfur mines, and 14 sand and gravel mines).[5] Sand and gravel are the primary mineral resources still extracted throughout the Los Angeles County region. The sand and gravel mine located nearest the project site is the Peck Road Gravel Pit located at 128 Live Oak Ave, Baldwin Park, CA 91706, approximately 13.87 miles northeast of the project site. The nearest active mine to the project site is a sulfur mine, Paramount Refinery, located at 14700 Downey Avenue, Paramount, CA 90723, located approximately 18.47 miles south of the project site. There are no designated active mine sites at the project site.

According to the Abandoned Mine Lands Unit of the California Department of Conservation, there are 365 abandoned mine features located in Los Angeles County, with 22 abandoned mine features (3 borrow pits, 3 conveyers, 13 gravel pits, 1 mine tunnel, and 2 quarries) in the City of Los Angeles.[6] There are no abandoned mine sites at the project site.

Construction Aggregate

The mining of sand and gravel began in the region in the early 1900s when the demand increased by the popular use of concrete in construction and building material and was spurred by construction associated with growth in California and the southwestern United States. Construction aggregate refers to sand and gravel (natural aggregates) and crushed stone (rock) that are used as Portland-cement-concrete aggregate, asphaltic-concrete aggregate, road base, railroad ballast, riprap, and fill for the production of other construction materials. According to the CGS, the state currently has approximately 4.3 billion tons of permitted resources, and the CGS estimates the state would need approximately 13.5 billion tons of aggregate in the next 50 years.[7]

[5] U.S. Geological Survey. Accessed 26 April 2016. Mineral Resources On-line Spatial Database. Available at: http://mrdata.usgs.gov/mineral-resources/active-mines.html

[6] California Department of Conservation, Abandoned Mine Lands Unit. Accessed 26 April 2016. Website. Available at: http://www.conservation.ca.gov/omr/abandoned_mine_lands

[7] Department of Conservation, Natural Resources Agency. Accessed 26 April 2016. *State Mining and Geology Board annual report 2013–2014*. Available at: http://www.conservation.ca.gov/smgb/reports/Annual%20Reports/Documents/SMGB_AR_13-14.pdf

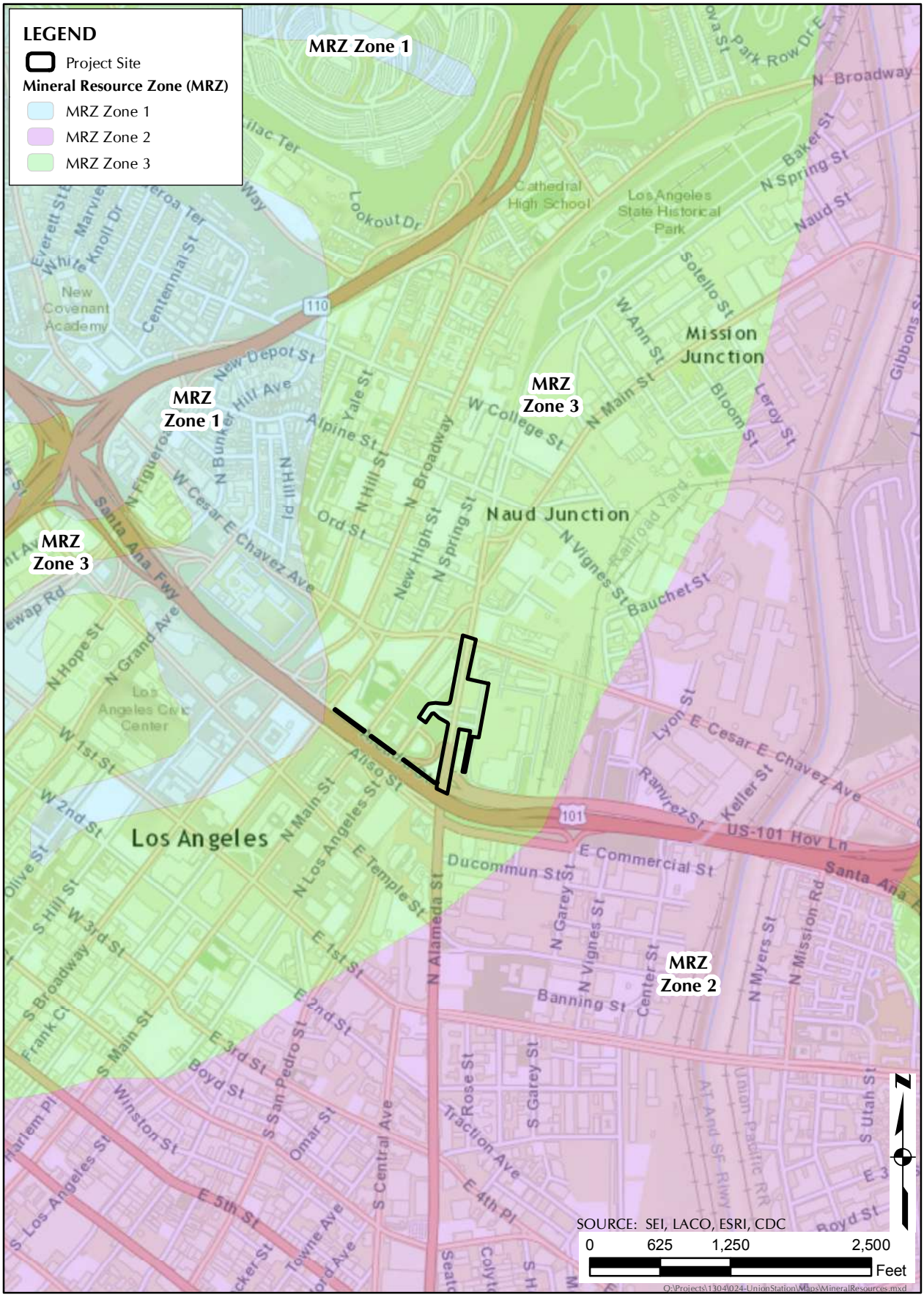


Figure 3.12.2-1. Mineral Resources Zones

California's construction industry is greatly dependent on readily available aggregate deposits that are within a reasonable distance to market regions. Aggregate is a low-unit-value, high-bulk-weight commodity; therefore, in order to minimize costs associated with transport, aggregate for construction must be obtained from nearby sources. If nearby aggregate sources do not exist, then transportation costs can quickly exceed the value of the aggregate. The 50-year demand is based on a per capita consumption forecast, developed from historic data (Table 3.12.2-1, *Permitted Aggregate Resources and 50-Year Demand in the Los Angeles County Region*). This method has been shown to be reasonably accurate in forecasting demand.

TABLE 3.12.2-1
PERMITTED AGGREGATE RESOURCES AND 50-YEAR DEMAND IN THE LOS ANGELES COUNTY REGION

	County	50-Year Demand (million tons)	Permitted Aggregate Reserves (million tons)	Permitted Aggregate Reserves Compared to 50-Year Demand (percent)	Projected Years Remaining
San Fernando Valley/Saugus-Newhall	Los Angeles	476	77	16	10 or fewer
San Gabriel Valley P-C Region	Los Angeles	809	322	40	11 to 20
Total Los Angeles Region		1,285	399	N/A	N/A

SOURCE: California Department of Conservation, California Geological Survey. Accessed 26 April 2016. *Aggregate Sustainability in California*. Available at: http://www.conservation.ca.gov/cgs/information/publications/ms/Documents/MS_52.pdf

Oil Fields

According to the Division of Oil, Gas & Geothermal Resources (DOGGR) 2013, there are 72 oil fields located in Los Angeles County (17 abandoned, 55 active), 26 of which are located in the City of Los Angeles (4 abandoned, 22 active), and 18 oil fields lie within a 10-mile radius of the project site (Figure 3.12.2-2, *Oil Fields within 10 Miles*).[8] The nearest active oil fields are:

[8] California Department of Conservation, Division of Oil, Gas & Geothermal Resources. Accessed 27 April 2016. Website. Available at: http://www.conservation.ca.gov/dog/Pages/Wellfinder.aspx

- Union Station: approximately 0.25 mile south of project site
- Los Angeles City: approximately 0.30 mile northwest of the project site
- Boyle Heights (abandoned): approximately 1.35 miles southwest of the project site
- Los Angeles Downtown: approximately 1.29 miles southwest of the project site
- Las Cienegas: approximately 2.21 miles southwest of the project site

There are no active or abandoned oil fields or extraction facilities on the project site.

Locally Important Mineral Resources

Based on a review of the Conservation Element of the City of Los Angeles General Plan, there are no known mineral resource recovery sites of local importance located within the project site.[9] The primary mineral resources within the City are rock, gravel, and sand deposits. Sand and gravel deposits follow the Los Angeles River flood plain, coastal plain, and other water bodies and courses. Significant potential deposit sites have been identified by the state geologist. They lie along the flood plain from the San Fernando Valley through downtown Los Angeles. The area identified within the project site has been developed with structures and is inaccessible for mining extraction. The sand and gravel mine located nearest the project site is the Peck Road Gravel Pit located at 128 Live Oak Ave, Baldwin Park, CA 91706, approximately 13.67 miles northeast of the project site.

[9] City of Los Angeles Department of City Planning. Adopted September 2001. Los Angeles General Plan, Conservation Element.

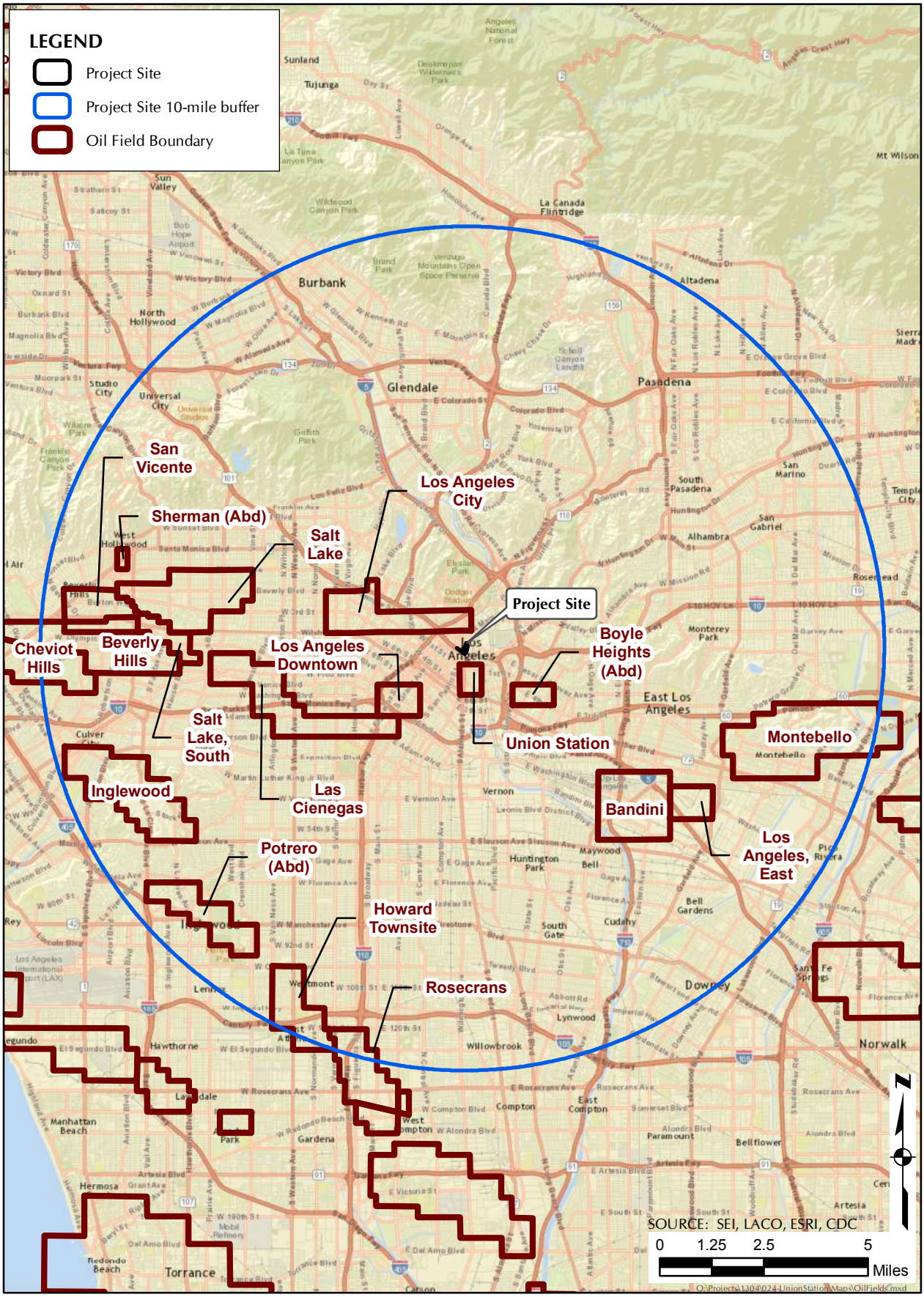


Figure 3.12.2-2. Oil Fields within 10 Miles

3.12.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of two questions when addressing the potential for significant impact to mineral resources. Would the proposed project:

(a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The proposed project would result in no impacts to mineral resources in relation to the loss of availability of a known mineral resource of statewide or regional importance. Based on a review of CGS,[10] there are no mineral resources of statewide importance designated in the project area. There are no designated active or abandoned mine sites within the project site. There are no active or abandoned oil fields or extraction facilities on the project site.[11,12] The proposed project site is zoned regional commercial and heavy industrial, and the project site has been developed with structures and is inaccessible for mining extraction. Therefore, the proposed project would result in no impacts related to the loss of known mineral resources of statewide or regional importance located within project site.

(b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The proposed project would not result in impacts to mineral resources in relation to the loss of availability of a known mineral resource recovery site. Based on a review of the Conservation Element of the City of Los Angeles General Plan,[13] there are no known mineral resource recovery sites of local importance located within the proposed project site. The project site does not lie within a designated MRZ-2. MRZ-3 designation does not include known significant mineral resources and is not included in the resource management provisions under the Conservation Element of the City of Los Angeles General Plan. The proposed project requires grading and reconfiguration of existing roadways, sidewalks, hardscape, and landscape in the forecourt of Los Angeles Union Station and surrounding areas. These improvements would not improve or decrease access to mineral resources of undetermined significance in the underlying MRZ-3 zone which is inaccessible in the existing condition, and would continue to be

[10] California Department of Conservation, Division of Oil, Gas & Geothermal Resources. Accessed 27 April 2016. Website. Available at: http://www.conservation.ca.gov/dog/Pages/Wellfinder.aspx

[11] U.S. Geological Survey. Accessed 26 April 2016. Mineral Resources On-line Spatial Database. Available at: http://mrdata.usgs.gov/mineral-resources/active-mines.html

[12] California Department of Conservation, Abandoned Mine Lands Unit. Accessed 26 April 2016. Website. Available at: http://www.conservation.ca.gov/omr/abandoned_mine_lands

[13] City of Los Angeles Department of City Planning. Adopted September 2001. Los Angeles General Plan, Conservation Element.

inaccessible after construction of the proposed project. Project construction is expected to utilize construction aggregate resources from the nearest sand and gravel mine in proximity to the proposed project site. All grading would be balanced within the property limits without the need for import or export from the site. Therefore, the proposed project would result in no impacts to mineral resources related to the loss of availability of a known locally important mineral resource recovery site.

3.12.4 Cumulative Impacts

The potential for cumulative impacts was evaluated in relation to both of the questions in the State CEQA Guidelines for mineral resources. The proposed project would result in no impact to mineral resources; therefore, there would be no contribution to cumulative impacts on mineral resources in the region. As there would be no direct, indirect, or cumulative impacts on mineral resources, no mitigation would be required.

3.12.5 Mitigation Measures

No mitigation would be required.

3.12.6 Level of Significance after Mitigation

There would be no impact to mineral resources.

3.13 Noise

This section of the Environmental Impact Report (EIR) analyzes potential impacts to noise from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The analysis of noise consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts (direct, indirect, and cumulative), mitigation measures, and level of significance after mitigation.

Noise was evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines). This section evaluates the potential impacts of the proposed project on noise through examination of documentation of on-site ambient noise levels, modeling of anticipated noise level based on the anticipated construction scenario, evaluation of the consistency with the Noise Element of the County of Los Angeles General Plan,[1] The Noise Element of the City of Los Angeles (City) General Plan,[2] the City's Noise Regulation outlined in Chapter XI of the Los Angeles Municipal Code (LAMC),[3] the City's CEQA Threshold Guide,[4] and the Federal Transit Authority's (FTA's) guidelines for assessing vibration impacts.[5]

Definitions

A-weighting: This is the method commonly used to quantify environmental noise that involves evaluation of all frequencies of sound, with an adjustment to reflect the constraints of human hearing. Because the human ear is less sensitive to low and high frequencies than to midrange frequencies, noise measurements are weighted more heavily within those frequencies of maximum human sensitivity in a process called A-weighting (dBA).

Ambient: Ambient is the total noise in the environment, excluding noise from the source of interest.

Community noise equivalent level (CNEL): CNEL represents the average daytime noise level during a 24-hour day, adjusted to an equivalent level to account for people's lower tolerance of noise during the evening and nighttime hours. Because community receptors are more sensitive to unwanted noise

[1] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 11: Noise Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch11.pdf

[2] Los Angeles City General Plan. February 1999. *Noise Element*. Prepared by: Department of City Planning. Los Angeles, CA.

[3] *City of Los Angeles Municipal Code*, Chapter XI, *Noise Regulation*.

[4] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Prepared by: Environmental Affairs Commission and the Environmental Affairs Department. Los Angeles, CA.

[5] Federal Transit Administration. May 2006. *Transit Noise and Vibration Impact Assessment*. Washington, DC.

intrusion during the evening and night, an artificial decibel increment is added to quiet-time noise levels. Sound levels are increased by 5 dBA during the evening, from 7:00 p.m. to 10:00 p.m. and by 10 dBA during the nighttime, from 10:00 p.m. to 7:00 a.m. during this quiet time period.

Day-night equivalent level (L_{dn}): L_{dn} is a measure of the 24-hour average noise level at a given location. It is based on a measure of the L_{eq} noise level over a given time period. The L_{dn} is calculated by averaging the L_{eq} for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 p.m. to 7:00 a.m.), by 10 dBA to account for the increased sensitivity of people to noises that occur at night.

Decibel (dB): dB is a unitless measure of sound on a logarithmic scale that indicates the squared ratio of sound pressure amplitude to a reference sound pressure amplitude. The reference pressure is 20 micropascals.

Equivalent sound level (L_{eq}): L_{eq} is a term typically used to express time averages. It is a steady-state energy level that is equivalent to the energy content of a varying sound level over a stated period of time, which means that the L_{eq} represents the noise level experienced over a stated period of time averaged as a single noise level.

Frequency: Frequency is the number of cycles per unit of time (seconds), expressed in hertz (Hz).

Noise: Noise is any sound that annoys or disturbs humans or that causes or tends to cause an adverse psychological or physiological effect on humans. Any unwanted sound.

Noise level (L_N): Another measure used to characterize noise exposure, L_N is the variation in sound levels over time, measured by the percentage exceedance level. L_{10} is the A-weighted sound level that is exceeded for 10 percent of the measurement period, and L_{90} is the level that is exceeded for 90 percent of the measurement period. L_{50} is the median sound level. Additional statistical measures include L_{min} and L_{max}, the minimum and maximum sound levels, respectively, measured during a stated measurement period.

Peak Particle Velocity (PPV): Defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in inches per second (in/sec).

Sound: A vibratory disturbance created by vibrating objects, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

Vibration: The mechanical motion of earth or ground, building, or other type of structure, induced by the operation of any mechanical device or equipment located upon or affixed thereto. For purposes of this report, the magnitude of the vibration shall be stated as the acceleration in "g" units (1 g is equal to 32.2 feet/second^2, or 9.81 meters/second^2).

3.13.1 Regulatory Setting

Federal

Noise Control Act

The adverse impacts of noise were officially recognized by the federal government in the Noise Control Act of 1972,[6] which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration agency prohibits exposure of workers to excessive sound levels. The U.S. Department of Transportation assumed a significant role in noise control through its various operating agencies. Surface transportation system noise is regulated by a host of agencies, including the FTA. Transit noise is regulated by the FTA, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). The federal government encourages local jurisdictions to use their land use regulatory authority to site new development to minimize potential noise impacts.

State

Senate Bill 860

In the State of California, State Senate Bill 860, which became effective January 1, 1976, directed the California Office of Noise Control within the State Department of Health Services to prepare the *Guidelines for the Preparation and Content of Noise Elements of the General Plan*.[7] One purpose of these guidelines was to provide sufficient information concerning the noise environment in the community so that noise could be considered in the land-use planning process. As part of this publication, Land Use Compatibility Standards were developed in four categories: Normally Acceptable, Conditionally Acceptable, Normally Unacceptable, and Clearly Unacceptable. These categories were based on earlier work done by the U.S. Department of Housing and Urban Development.

[6] 42 U.S.C., Noise Control Act of 1972, § 4901-4918.

[7] California Department of Health Services, Office of Noise Control. February 1976. *Guidelines for the Preparation and Content of Noise Elements of the General Plan*. Contact: P.O. Box 942732 Sacramento, CA 94234–7320.

The interpretation of these four categories is as follows:

Normally Acceptable:	Specified land use is satisfactory without special insulation.
Conditionally Acceptable:	New development requires detailed analysis of noise insulation requirements.
Normally Unacceptable:	New development is discouraged and requires a detailed analysis of insulation features.
Clearly Unacceptable:	New development should not be undertaken.

The state has developed a land-use compatibility matrix for community noise environments that further defines four categories of acceptance and assigns CNEL values to them. In addition, the State Building Code (Part 2, Title 24, California Code of Regulations) establishes uniform minimum noise insulation performance standards to protect persons within new hotels, motels, dormitories, long-term care facilities, apartment houses, and residential units other than detached single-family residences from the effects of excessive noise, including, but not limited to, hearing loss or impairment and interference with speech and sleep. Residential structures to be located where the CNEL or L_{dn} is 60 dBA or greater are required to provide sound insulation to limit the interior CNEL to a maximum of 45 dBA. An acoustic, or noise, analysis report prepared by an experienced acoustic engineer is required for the issuance of a building permit for these structures. Conversely, land use changes that result in increased noise levels at residences of 60 dBA or greater must be considered in the evaluation of impacts to ambient noise levels. Table 3.13.1-1, *Land Use Compatibility Matrix*, depicts the acceptability of noise levels for a variety of uses.

TABLE 3.13.1-1
LAND USE COMPATIBILITY MATRIX

CHAPTER 3 LAND USE CATEGORY	Community Noise Exposure (L_{dn} or CNEL, dB)						
	55	60	65	70	75	80	
Residential - Low Density Single-Family, Duplex, Mobile Homes							
Residential - Multi-Family							
Transient Lodging - Motels Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

Normally Acceptable - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice.

Normally Unacceptable - New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable - New construction or development should generally not be undertaken.

SOURCE: Adapted from: Governor's Office of Planning and Research. 2003. *State of California General Plan Guidelines*. Appendix C, Noise Element Guidelines, Figure 2. Sacramento, CA.

Regional

County of Los Angeles Code of Ordinances

Noise

The County maintains the health and welfare of its residents with respect to noise through nuisance abatement ordinances and land use planning. The County Noise Control Ordinance, Title 12 of the County Code, was adopted by the Los Angeles County Board of Supervisors in 1977 "to control unnecessary, excessive, and annoying noise and vibration." It declares that the purpose of the County policy is to "maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the county where noise levels are above acceptable values."

On August 14, 2001, the Los Angeles County Board of Supervisors approved an ordinance amending Title 12 of the County Code to prohibit loud, unnecessary, and unusual noise that disturbs the peace and/or quiet of any neighborhood or that causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area. Regulations can include requirements for sound barriers, mitigation measures to reduce excessive noise, or the placement and orientation of buildings, and can specify the compatibility of different uses with varying noise levels, as shown in Table 3.13.1-2, *County of Los Angeles Community Noise Criteria*.

TABLE 3.13.1-2
COUNTY OF LOS ANGELES COMMUNITY NOISE CRITERIA

Noise Zone	Land Use of Receptor Property	Time	Noise Levels (dBA)				
			Std 1 L50 30 min/hr	Std 2 L25 15 min/hr	Std 3 L8.3 5 min/hr	Std 4 L1.7 1 min/hr	Std 5 L0 at No Time
I	Noise Sensitive	Anytime	45	50	55	60	65
II	Residential	10 p.m. – 7 a.m.	45	50	55	60	65
		7 a.m. – 10 p.m.	50	55	60	65	70
III	Commercial	10 p.m. – 7 a.m.	55	60	65	70	75
		7 a.m. – 10 p.m.	60	65	70	75	80
IV	Industrial	Anytime	70	75	80	85	90

SOURCE: County of Los Angeles. Title 12, Chapter 8, Noise Control.

In addition to the community noise criteria, the County codes establish interior noise standards for residential dwellings. According to Section 12.08.400 of the County Code, no person shall operate or cause to be operated within a dwelling unit, any source of sound, or allow the creation of any noise, which causes the noise level when measured inside a neighboring receiving dwelling to exceed the following standards:

- Standard No. 1: The applicable interior noise level for cumulative period of more than 5 minutes in any hour; or
- Standard No. 2: The applicable interior noise level plus 5 dB for a cumulative period or more than one minute in any hour; or
- Standard No. 3: The applicable interior noise level plus 10 dB or the maximum measured ambient noise level for any period of time.

Section 12.08.440 of the County codes states that operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, such that the sound therefrom creates a noise disturbance across a residential or commercial real property line, except for emergency work of public service utilities or by variance issued by the health office, is prohibited. If noise disturbance crosses a residential or commercial property line, the County has established maximum noise levels for both mobile and stationary equipment (Table 3.13.1-3, *County of Los Angeles Construction Noise Restrictions*).

TABLE 3.13.1-3
COUNTY OF LOS ANGELES CONSTRUCTION NOISE RESTRICTIONS

Time Frame	Single-Family Residential	Multifamily Residential	Semiresidential/ Commercial
Mobile equipment*			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m. (daytime)	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. (nighttime) and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA
Stationary equipment**			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m. (daytime)	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. (nighttime) and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

NOTES:
* = Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment.
** = Maximum noise levels for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment.
SOURCE: County of Los Angeles. Title 12, Chapter 8, Noise Control.

The following exterior noise levels shall apply to all receptor properties within a designated noise zone:

> Standard No. 1 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 minutes in any hour. Standard No. 1 shall be the applicable noise level from subsection A of this section; or, if the ambient L50 exceeds the foregoing level, then the ambient L50 becomes the exterior noise level for Standard No. 1.

Standard No. 2 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any hour. Standard No. 2 shall be the applicable noise level from subsection A of this section plus 5 dB; or, if the ambient L25 exceeds the foregoing level, then the ambient L25 becomes the exterior noise level for Standard No. 2.

Standard No. 3 shall be the exterior noise level which may not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from subsection A of this section plus 20 dB; or, if the ambient L8.3 exceeds the foregoing level, then the ambient L8.3 becomes exterior noise level for Standard No. 3.

Standard No. 4 shall be the exterior noise level which may not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from subsection A of this section plus 15 dB; or, if the ambient L1.7 exceeds the foregoing level, then the ambient L1.7 becomes the exterior noise level for Standard No. 4.

Standard No. 5 shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from subsection A of this section plus 20 dB; or, if the ambient L0 exceeds the foregoing level then the ambient L0 becomes the exterior noise level for Standard No. 5.

Vibration

Title 12, Section 12.08.560, of the County code provides criteria for construction-generated ground-borne vibration:

- Operating or permitting the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hertz.

County of Los Angeles General Plan 2035, Noise Element

Twelve policies are outlined in the Los Angeles County General Plan 2035 related to noise:[8]

[8] County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. *Los Angeles County 2035 General Plan*: Chapter 11: Noise Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch11.pdf

Goal N-1: The reduction of excessive noise impacts.

- **Policy N 1.1:** Utilize land uses to buffer noise-sensitive uses from sources of adverse noise impacts.
- **Policy N 1.2:** Reduce exposure to noise impacts by promoting land use compatibility.
- **Policy N 1.3:** Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).
- **Policy N 1.4:** Enhance and promote noise abatement programs in an effort to maintain acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards and other applicable noise standards.
- **Policy N 1.5:** Ensure compliance with the jurisdictions of State Noise Insulation Standards (Title 24, California Code of Regulations and Chapter 35 of the Uniform Building Code), such as noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or L_{dn}) noise exposure contours.
- **Policy N 1.6:** Ensure cumulative impacts related to noise do not exceed health-based safety margins.
- **Policy N 1.7:** Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation systems.
- **Policy N 1.8:** Minimize noise impacts to pedestrians and transit-riders in the design of transportation facilities and mobility networks.
- **Policy N 1.9:** Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.
- **Policy N 1.10:** Orient residential units away from major noise sources (in conjunction with applicable building codes).
- **Policy N 1.11:** Maximize buffer distances and design and orient sensitive receptor structures (hospitals, residential, etc.) to prevent noise and vibration transfer from commercial/light industrial uses.
- **Policy N 1.12:** Decisions on land adjacent to transportation facilities, such as the airports, freeways and other major highways, must consider both existing and future noise levels of these transportation facilities to assure the compatibility of proposed uses.

Local

City of Los Angeles Noise Element

The Noise Element of the City of Los Angeles General Plan outlines the goal, objectives, and policies regarding the management of noise within the City. The following policies listed in the Noise Element of the City's General Plan are applicable to the proposed project:[9]

- Policy 2.2: Enforce and/or implement applicable city, state, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance.
- Policy 3.1: Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts.

City of Los Angeles Municipal Code[10]

The City of Los Angeles Municipal Code has noise ordinances to monitor and regulate noise. The relevant applicable clauses are reproduced below:

Section 111.02. Sound Level Measurement Procedure and Criteria

Where the sound alleged to be offending is of a type or character set forth below, the following values shall be added to the sound level measurement of the offending noise:

1. Except for noise emanating from any electrical transformer or gas metering and pressure control equipment existing and installed prior to the effective date of the ordinance enacting this chapter, any steady tone with audible fundamental frequency or overtones have 200 Hz, + 5 dB.

2. Repeated impulsive noise, +5 dB.

3. Noise occurring more than 5 but less than 15 minutes in any period of 60 consecutive minutes between the hours of 7:00 a.m. and 10:00 p.m. of any day, –5 dB.

4. Noise occurring five minutes or less in any period of 60 consecutive minutes, between the hours of 7:00 a.m. and 10:00 p.m. of any day, –5 dB.

[9] Los Angeles City General Plan. February 1999. *Noise Element*. Prepared by: Department of City Planning. Los Angeles, CA.

[10] *City of Los Angeles Municipal Code*, Chapter XI, *Noise Regulation*.

Section 112.05. Maximum Noise Level of Powered Equipment or Powered Hand Tools.

Between the hours of 7:00 a.m. and 10:00 p.m., in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet therefrom:

(a) 75 dB(A) for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment;
(b) 75 dB(A) for powered equipment of 20 HP or less intended for infrequent use in residential areas, including chain saws, log chippers and powered hand tools;
(c) 65 dB(A) for powered equipment intended for repetitive use in residential areas, including lawn mowers, backpack blowers, small lawn and garden tools and riding tractors;

The noise limits for particular equipment listed above in (a), (b) and (c) shall be deemed to be superseded and replaced by noise limits for such equipment from and after their establishment by final regulations adopted by the Federal Environmental Protection Agency and published in the Federal Register. Said noise limitations shall not apply where compliance therewith is technically infeasible. The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques during the operation of the equipment.

Chapter IV - Section 41.40 Noise Due to Construction, Excavation Work – When Prohibited

(a) No person shall, between the hours of 9:00 P.M. and 7:00 A.M. of the following day, perform any construction or repair work of any kind upon, or any excavating for, any building or structure, where any of the foregoing entails the use of any power driven drill, riveting machine excavator or any other machine, tool, device or equipment which makes loud noises to the disturbance of persons occupying sleeping quarters in any dwelling hotel or apartment or other place of residence. In addition, the operation, repair or servicing of construction equipment and the jobsite delivering of construction materials in such areas shall be prohibited during the hours herein specified. Any person who knowingly and willfully violates the foregoing provision shall be deemed guilty of a misdemeanor punishable as elsewhere provided in this Code.

(b) The provisions of Subsection (a) shall not apply to any person who performs the construction, repair or excavation work involved pursuant to the express written permission of the Board of Police Commissioners through its Executive Director. The Executive Director, on behalf of the Board, may grant this permission, upon application in writing, where the work proposed to be done is in the public interest, or where hardship or injustice, or unreasonable delay would result from its interruption during the hours mentioned above, or where the building or structure

involved is devoted or intended to be devoted to a use immediately related to public defense. The provisions of this section shall not in any event apply to construction, repair or excavation work done within any district zoned for manufacturing or industrial uses under the provisions of Chapter I of this Code, nor to emergency work necessitated by any flood, fire or other catastrophe.

(c) No person, other than an individual homeowner engaged in the repair or construction of his single-family dwelling shall perform any construction or repair work of any kind upon, or any earth grading for, any building or structure located on land developed with residential buildings under the provisions of Chapter I of this Code, or perform such work within 500 feet of land so occupied, before 8:00 a.m. or after 6:00 p.m. on any Saturday or national holiday nor at any time on any Sunday. In addition, the operation, repair or servicing of construction equipment and the job-site delivering of construction materials in such areas shall be prohibited on Saturdays and on Sundays during the hours herein specified. The provisions of this subsection shall not apply to persons engaged in the emergency repair of:

1. Any building or structure.
2. Earth supporting or endangering any building or structure.
3. Any public utility.
4. Any public way or adjacent earth.

(j) As determined by the Executive Director of the Board, the provisions of Subsection (c) shall not apply to major public works construction by the City of Los Angeles and its proprietary Departments, including all structures and operations necessary to regulate or direct traffic due to construction activities. The Board, through its Executive Director, pursuant to Subsection (b) will grant a variance for this work and construction activities will be subject to all conditions of the variance as granted. Concurrent with the request for a variance, the City Department that will conduct the construction work will notify each affected Council district office and established Neighborhood Council of projects where proposed Sunday and/or Holiday work will occur. In summary, typical-weekday construction activities are prohibited before 7 a.m. and after 9 p.m. Construction activities on holidays and Saturdays (when occurring with 500-feet of the project area) are prohibited before 8 a.m. and after 6 p.m., and fully prohibited at any time on Sundays. If construction is required outside of the allowable time periods, a variant must be requested by the Executive Director of the Board of Police Commissioners.

3.13.2 Affected Environment / Existing Conditions

The noise climate in the project area is dominated by traffic noise, except for areas near the Metro Railyard and the existing rail lines where rail and industrial noises are intermittently audible. The nosiest locations are close to major roadways that run through the project area, such as Main Street, Alameda Street, Los Angeles Street, Cesar Chavez Avenue, and Arcadia Street. Research was conducted on adjacent long-term monitoring in the project area to characterize the 24-hour noise level in the project vicinity. The Cornfield Arroyo Seco Specific Plan provides a representative 24-hour measurement of the area at the North Broadway at Pasadena Avenue of 71 L_{dn}. This location's noise environment is very similar to the noise environment at LAUS. Therefore, it is anticipated that L_{dn} noise levels within the project vicinity will be consistent with this noise levels.

The characterization and evaluation of ambient noise and vibration levels was based on review of noise and vibrations studies for locations in the vicinity of the proposed project, map analysis to identify sensitive receptors, and daytime and nighttime noise measurements (see Appendix A of the *Noise Technical Report*, which is Appendix G to the Draft EIR, and Figure 3.13.2-1, *Short-Term Noise Measurement Locations*). Anticipated noise levels for the construction and maintenance phases of the project were evaluated based on U.S. Environmental Protection Agency data for the types of equipment to be used in the construction activities (Appendix A of the *Noise Technical Report*).The operational phase of the project which involves people walking and cycling was considered in light of the State of California Land Use Compatibility Matrix (Table 3.13.1-1). Short-term measurements (i.e., 15-minutes) were conducted at a total of five representative outdoor use areas along the Arcadia and Los Angeles Streets near the areas of proposed roadway improvements as shown in the collected field notes in Appendix A of the *Noise Technical Report*. Figure 3.13.2-1 illustrates the five measurement locations. Measurements were conducted at these positions to collect noise level data that quantitatively characterize the existing ambient outdoor sound environment.

Sensitive Receptors

The project vicinity is surrounded by commercial, industrial and recreational land uses. Particular land uses were identified that would be more sensitive to changes in noise levels from construction activities. These sensitive land uses were identified within 500 feet of the project site. The following sensitive receptors were identified:

- An apartment complex, the Mozaic Apartments, is adjacent to the northeast corner of the project site at the corner of Alameda Street and Cesar Chaves Avenue.
- The First 5 LA daycare facility is at the south end of the project site along Alameda Street.
- The Los Angeles Plaza Park and El Pueblo are at the intersection of Alameda Street and Los Angeles Street.
- Two churches, Our Lady Queen of Angeles Catholic Church and La Plaza Methodist Church, are along Main Street.

Site Visit Observations

Noise measurements were made to determine the existing noise environment in and around the site. The noise measurements consisted of attended spot measurements**.** A site visit and noise measurements were conducted on May 24, 2017 (daytime), and June 8, 2017 (nighttime), to identify noise levels within the existing noise environment.

Sounds perceived during the site visit and noise measurements included the source types that are characteristic of urban outdoor environments: traffic noise on Santa Fe Avenue and other local streets, HVAC noise from adjacent Metro facilities, occasional commuter rail pass-bys (LA Metro Light Rail and Rapid Transit, Amtrak, and Metrolink) and heavy freight rail pass-bys (Union Pacific/BNSF), and frequent aircraft overflights.

Noise Measurement Results

Short-term measurement data was collected at five locations showing measured A-weighted L_{eq} ambient noise levels within the proposed project site (Table 3.13.2-1, *Short-Term Measurements*). Detailed measurement and prediction data can be found in Appendix B of the *Noise Technical Report* (Appendix G to the Draft EIR). Construction activities may be occurring during both daytime and nighttime periods of the day; therefore, to assess impacts, short-term measurements were taken during both time periods to identify the noise environment at these times. The short-term measurements demonstrate that the 15-minute L_{eq} dBA noise readings for day and night range from the high 60s to the low 70s. These levels currently exceed the Los Angeles Noise Criteria of 65 dBA for residential land uses and 70 dBA for commercial land uses.

TABLE 3.13.2-1
SHORT-TERM MEASUREMENTS

Location ID	Address	Noise Reading Daytime		Noise Reading Nighttime	
		15-minute L_{eq}	Time	15-minute L_{eq}	Time
ST-1	171 Arcadia	68.8	11:00	72.3	19:13
ST-2	430 Sanchez Street	69.1	11:28	72.7	19:34
ST-3	711 Alameda	72.7	11:55	69.8	20:34
ST-4	125 Paseo del La Plaza	66.6	12:30	65.9	19:54
ST-5	845 Alameda	67.7	1:17	69.3	20:12

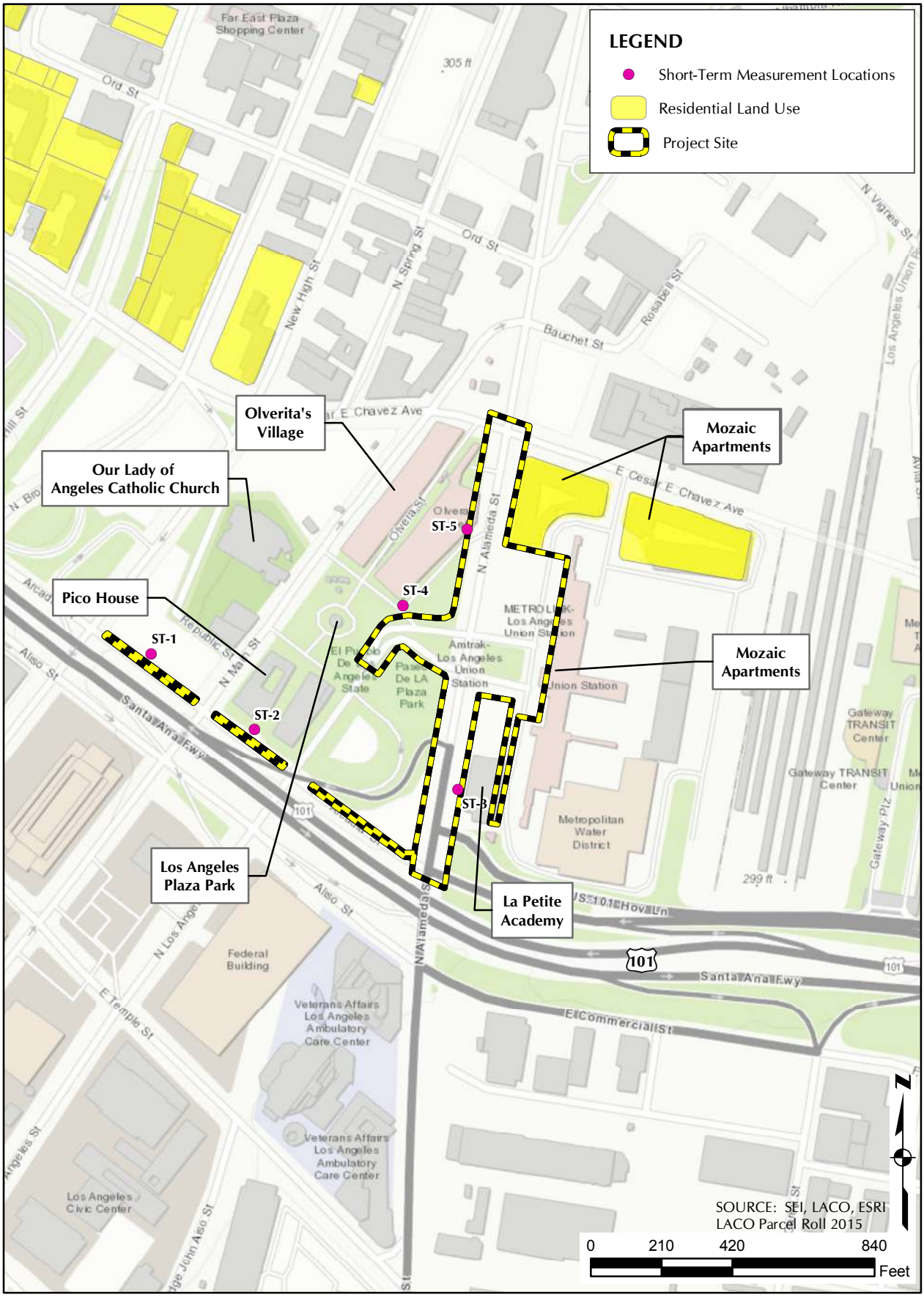


Figure 3.13.2-1. Short-Term Noise Measurement Locations

Project Design Features and Best Management Practices (BMPs)

Adherence to local noise ordinances articulated in Section 112.05 and Section 41.40 of the City of Los Angeles Municipal Code[11] and construction BMPs would be used to reduce temporary noise levels during construction of the proposed project:

- Construction and demolition shall be restricted to the hours of 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday.
- Demolition and construction activities shall be scheduled to avoid operating several pieces of equipment simultaneously, which causes high noise levels.
- The project contractor shall use power construction equipment with state-of-the-art noise shielding and muffling devices.
- Whenever construction occurs adjacent to occupied residences (on- or off-site), temporary barriers shall be constructed around the construction sites to shield the ground floor of the noise-sensitive uses. These barriers shall be of three-quarter-inch medium density plywood sheeting, or equivalent, and shall achieve an STC of 30 or greater, based on certified sound transmission loss data taken according to American Society for Testing and Materials Test Method E90 or as approved by the City of Los Angeles Building Department.
- Construction equipment staging areas shall be located as far as feasible from residential areas while still serving the needs of construction contractors.
- Routes for heavy construction site vehicles shall be identified to minimize noise impacts to residences and noise sensitive receptors. Activities that generate high noise levels—such as pile the use of jackhammers, drills, and impact wrenches—shall be restricted to the hours of 7:00 a.m. to 9:00 p.m.

According to the existing daytime ambient noise levels at the five monitoring locations the ambient noise levels ranged from 66.6 dBA (Leq) at monitoring location ST-4 to 72.7 dBA (Leq) at monitoring location ST-3. The existing nighttime ambient noise levels at the five monitoring locations ranged from 65.9 dBA (Leq) at monitoring location ST-4 to 72.7 dBA (Leq) at monitoring location ST-2. The average daytime noise level for the five monitoring locations was 69 dBA (Leq). The average nighttime noise level for the five monitoring locations was 70 dBA (Leq). The existing ambient noise levels at all monitoring locations currently exceed the City's presumed daytime ambient noise standard of 60 dBA (Leq) by an average of 9.5 dBA (Leq). Therefore, the measured existing ambient noise levels more accurately characterize the baseline conditions for the purposes of determining the proposed project's noise impacts on the surrounding community.

[11] City of Los Angeles Municipal Code. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

Based on these noise levels and the fact that noise attenuates from a point source at a rate of approximately 6.0 dBA per doubling of distance, the noise impacts on sensitive receptors can be determined by Equation 1 for noise attenuation over distance:

(1) $$L_2 = L_1 - 20\ log_{10}\left(\frac{d_1}{d_2}\right)$$

where

L_1 = known sound level at d_1
L_2 = desired sound level at d_2
d_1 = distance of known sound level from the noise source
d_2 = distance of the sensitive receptor from the noise source

3.13.3 Environmental Impacts / Environmental Consequences

Based upon the criteria established in the *City of Los Angeles CEQA Thresholds Guide*, noise associated with the operation of a project would normally have a significant impact on noise levels if the project would increase the ambient noise level by 3 dBA CNEL at the property line of commercial buildings where the resulting noise level is at least 75 dBA CNEL. In addition, any long-term increase of 5 dB CNEL or more is considered to cause a significant impact. A project would typically have a significant operational noise impact if the proposed land use would be exposed to noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.[12]

The City of Los Angeles has not adopted specific thresholds for groundborne vibration impacts. Therefore, this analysis uses the Federal Railway Administration's vibration impact thresholds for sensitive buildings to determine whether groundborne vibration would be "excessive." No thresholds have been adopted or recommended for commercial uses.[13]

[12] City of Los Angeles Municipal Code. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

[13] City of Los Angeles Municipal Code. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

The State CEQA Guidelines recommend the consideration of six questions when addressing the potential for significant impact to noise. Would the project result in:

(a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The proposed project would result in less than significant impacts to noise related to exposure or generation of noise levels in excess of established standards. During construction of the proposed project, sensitive receptors will be exposed to noise levels above the thresholds set forth in the City's CEQA Threshold Guide, which states that a project would have a significant impact on noise levels from construction if construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a sensitive receptor.[14] However, with the incorporation of project design features and BMPs as specified above, construction and operation of the proposed project would result in less than significant impacts from noise in relation to exposure or generation of noise levels in excess of established standards.The proposed project would not exceed the thresholds set forth in the City's CEQA Threshold Guide and thus would be in compliance with the City's noise regulation.

Construction

There would be temporary increases during construction of the proposed project including the construction of a small transit-serving building located at the northern end of the forecourt. During each phase of construction the noise level would have the potential to exceed the City of Los Angeles day time noise level 75 dBA at any given hour during day time construction (Table 3.13.3-1, *Construction Equipment by Phase with Associated Maximum One-Hour L_{eq}*). Project design features and BMPs consistent with the City of Los Angeles Municipal Code requirements articulated in Section 112.05 and Section 41.40[15] would be implemented to reduce the temporary increase in noise levels from construction of the proposed project to less than significant levels. The use of temporary noise mufflers barriers and blankets would reduce noise levels for construction equipment by up to 15 dBA[16] Maintenance activities that include the use of landscaping equipment such as street sweepers and electric leaf blowers are comparable to the existing ambient noise conditions and would include maintenance of the small transit-serving building. Low-maintenance landscaping features will be used and, therefore, would not increase noise levels substantially over the existing conditions. Therefore,

[14] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Prepared by: Environmental Affairs Commission and the Environmental Affairs Department. Los Angeles, CA.

[15] City of Los Angeles Municipal Code. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

[16] U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

with the incorporation of project design features and BMPs, the construction and maintenance of the proposed project would result in less than significant impacts from noise in relation to exposure or generation of noise levels in excess of established standards, and no mitigation would be required.

TABLE 3.13.3-1
CONSTRUCTION EQUIPMENT BY PHASE WITH ASSOCIATED MAXIMUM ONE-HOUR L_{EQ}

Equipment Type	Number of Equipment	dBA at 50 feet	Predicted Noise Levels based on Two Noisiest Pieces of Equipment (dBA) 1-hr L_{eq}
Demolition			
Concrete Saw	1	76	88
Rubber Tired Dozer	1	85	
Tractor/Loader/Backhoe	3	80	
Hydraulic Excavator	2	85	
Site Preparation			
Grader	1	85	88
Rubber Tired Dozer	1	85	
Tractor/Loader/Backhoe	1	85	
Grading			
Grader	1	85	88
Rubber Tired Dozer	1	85	
Paving			
Cement and Mortar Mixer	1	85	92
Pavers	1	89	
Paving Equipment	1	89	
Rollers	1	74	
Tractor/Loader/Backhoe	1	85	

Operation

The average daytime noise level for the 5 monitoring locations was 69 dBA (Leq). The average nighttime noise level for the five monitoring locations was 70 dBA (Leq). The existing ambient noise levels at all monitoring locations currently exceed the City's presumed daytime ambient noise standard of 60 dBA (Leq) by an average of 9.5 dBA (Leq). The existing environment has noise levels consistent with high traffic volumes that would produce noise levels in the upper 60s and low 70s dBA range. However, the proposed project improvements would not result in additional traffic on nearby local access roads to LAUS. Further, some of the improvements result in road closures and reduced lanes that would reduce noise levels within the project area. Therefore, the operation of the proposed project would result in less than significant impacts from noise in relation to exposure or generation of noise levels in excess of established standards. Therefore, mitigation measures would not be required.

(b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

The proposed project would result in no impacts to noise in relation to generation of excessive ground-borne vibration or ground-borne noise. As a result of the construction, operation, and maintenance of the proposed project, no groundborne vibration would occur. The proposed project would reduce the number of travel lanes and would not add capacity to existing roadways. Groundborne vibration from vehicular traffic rarely causes a disturbance within buildings located in urban environments unless the pavement surface is uneven or the receptor is highly sensitive (e.g., a scientific research establishment) to groundborne vibration. Therefore, the proposed project would result in no impacts to noise, and mitigation measures would not be required.

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed project would result in less than significant impacts to noise in relation to permanent increases in ambient noise levels as a result of operation and maintenance of the proposed project. The operation of the proposed project would not increase noise over existing exterior levels within in the project area. The proposed project improvements will not add additional traffic on nearby local access roads to LAUS. Nearby buildings would not experience a change in noise levels during the operation of the project. The existing nighttime ambient noise levels at the five monitoring locations ranged from 65.9 dBA (Leq) at monitoring location ST-4 to 72.7 dBA (Leq) at monitoring location ST-2. The average daytime noise level for the five monitoring locations was 69 dBA (Leq). The average nighttime noise level for the five monitoring locations was 70 dBA (Leq). The existing ambient noise levels at all monitoring locations currently exceed the City's presumed daytime ambient noise standard of 60 dBA (Leq) by an average of 9.5 dBA (Leq). Cycling, walking, and conversational noise consistent with forecourt and esplanade uses normally generate minimal noise levels of approximately 55 dBA (Leq) as identified by the EPA for certain outdoor uses.[17] Project elements, which include water features such as a splash pad, and a small transit-serving building, would be consistent with the existing pedestrian conversation noise, and ambient noise levels experienced within the project area. Outdoor activities can range in noise levels of 75 dBA to 80 dBA (Table 3.13.1-1). Therefore, the proposed project would result in less than significant impacts to noise in relation to permanent increases in ambient noise levels as a result of operation and maintenance of the proposed project, and no mitigation would be required.

[17] US Environmental Protection Agency. EPA Identifies Noise Levels Affecting Health and Welfare. Available at: https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html

(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Construction

The proposed project would result in less than significant impacts to noise related to temporary or periodic increases in ambient noise levels from the proposed project. The construction of the proposed project would require four phases of construction: demolition, site preparation, grading and paving (including striping/new configuration on Alameda and Los Angeles Streets) and includes the construction of a small transit-serving building located at the northern end of the forecourt. The closest receptors are the Mozaic Apartments, La Petite Academy, and La Plaza Park, which are within 50 feet of where construction and maintenance would occur. Noise would be produced by the operation of heavy-duty equipment. During each phase of construction the noise level would have the potential to exceed the City of Los Angeles day time noise level 75 dBA at any given hour during day time construction (Table 3.13.3-1). Project design features and BMPs consistent with the City of Los Angeles Municipal Code requirements articulated in Section 112.05 and Section 41.40[18] would be implemented to reduce the temporary increase in noise levels from construction of the proposed project to less than significant levels. The use of temporary noise mufflers barriers and blankets would reduce noise levels for construction equipment by up to 15 dBA[19] Maintenance activities which include the use of landscaping equipment such as street sweepers and electric leaf blowers including maintenance of the small transit-serving building are comparable to the existing ambient noise conditions. Low maintenance landscaping features will be used and therefore, would not increase noise levels substantially over the existing conditions. Therefore, the construction and maintenance of the proposed project would result in less than significant impacts to noise in relation to exposure or generation of noise levels in excess of established standards. Therefore, mitigation measures would not be required.

Operation

Impacts to noise related to temporary or periodic increases in ambient noise levels from the proposed project would be less than significant in regards to operational noise. The average daytime noise level for the five monitoring locations was 69 dBA (Leq). The average nighttime noise level for the five monitoring locations was 70 dBA (Leq). The existing ambient noise levels at all monitoring locations currently exceed the City's presumed daytime ambient noise standard of 60 dBA (Leq) by an average of 9.5 dBA (Leq). The existing environment has noise levels consistent with high traffic volumes that would

[18] City of Los Angeles Municipal Code. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

[19] U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

produce noise levels in the upper 60s and low 70s dBA range. However, the proposed project improvements would not result in additional traffic on nearby local access roads to LAUS. Further, some of the improvements result in road closures and reduced lanes that would reduce noise levels within the project area. Cycling, walking, and conversational noise consistent with forecourt and esplanade uses normally generate minimal noise levels of approximately 55 dBA (Leq) as identified by the EPA for certain outdoor.[20] Project elements, which include water features such as a splash pad, and a small transit-serving building, would be consistent with the existing pedestrian conversation noise, and ambient noise levels experienced within the project area. Outdoor activities can range in noise levels of 75 dBA to 80 dBA (Table 3.13.1-1). Therefore, the operation of the proposed project would result in less than significant impacts to noise in relation to exposure or generation of noise levels in excess of established standards, and mitigation measures would not be required.

As shown in Table 3.13.3-1, the paving phase of project construction would generate the highest levels of noise. This is due in large part to the operation of heavy equipment, though it should be noted that only a limited amount of equipment will be operating near a given location at a particular time. Based on the information in Table 3.13.3-1, construction noise levels could periodically reach approximately 77 to 89 dBA at a distance of 50 feet from the project site. As stated above, a project would have a significant impact on noise levels from construction if construction activities lasting more than 10 days in a 3-month period would exceed existing ambient exterior noise levels by 5 dBA or more at a sensitive receptor. Therefore, construction activities would result in a significant impact if noise levels exceed 74.5 dBA at a sensitive receptor.[21]

Project design features and BMPs consistent with the City of Los Angeles Municipal Code requirements articulated in Section 112.05 and Section 41.40[22] would be implemented to reduce the temporary increase in noise levels from construction of the proposed project to less than significant levels. The use of temporary noise mufflers barriers and blankets would reduce noise levels for construction equipment by up to 15 dBA[23] Therefore, impacts to noise related to temporary or periodic increases in ambient noise levels from the proposed project would be less than significant, and no mitigation is required.

[20] US Environmental Protection Agency. EPA Identifies Noise Levels Affecting Health and Welfare. Available at: https://archive.epa.gov/epa/aboutepa/epa-identifies-noise-levels-affecting-health-and-welfare.html

[21] Average ambient noise level at proposed project site (69.5 dBA) + Significance Threshold Allowance (5 dBA) = 74.5 dBA.

[22] City of Los Angeles Municipal Code. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

[23] U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project would result in no impacts to noise in relation to public airports. The project area is outside of the LAX airport noise contour (see Figure 3.9.2-3, *Airports*, in Section 3.9*, Hazards and Hazardous Materials*). The proposed project would not generate operational noise levels that would increase the noise within the existing environment. Therefore, the proposed project would not result in exposure to people residing or working in the project area to excessive noise levels associated with public airports or public use airports, and mitigation measures would not be required.

(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project would result in no impacts to noise in relation to private airstrips. The project site is not located within the vicinity of a private airstrip (Figure 3.9.2-3). The nearest private airstrip, Goodyear Blimp Base Airport, is located approximately 14 miles southwest of the project site. Therefore, the proposed project area would not result in exposure to people residing or working in the project area to excessive noise levels associated with private airstrips, and mitigation measures would not be required.

3.13.4 Cumulative Impacts

(a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The proposed project would result in a less than significant incremental contribution to cumulative impacts in regards to generating noise levels in excess of standards in the local general plan or noise ordinance during construction, operation, or maintenance of the proposed project when combined with the related past, present, and reasonably foreseeable future projects identified in Section 2.7, *Related Projects*. Construction activities were identified for related projects that would coincide with the project's construction operations. Noise attenuation levels were calculated in accordance with standards established by the City of Los Angeles and with incorporation of the project design features, BMPs compliance with the construction hours stipulated in the City Noise Control Ordinance, cumulative impacts associated with noise during construction would be below the level of significance, and no mitigation would be required.

The proposed project improvements would not result in additional traffic on nearby local access roads to LAUS and some elements of the project improvements result in road closures and reduced lanes that would reduce noise levels within the project area. Therefore, the proposed project would result in a less than significant incremental contribution to cumulative impacts in regards to exposure or generation of noise levels in excess of established standards, and no mitigation would be required.

(b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. As a result of the construction, operation, and maintenance of the proposed project, no groundborne vibration would occur. The proposed project reduces the number of travel lanes and does not add capacity to existing roadways. Groundborne vibration from vehicular traffic rarely causes a disturbance within buildings located in urban environments unless the pavement surface is uneven, or the receptor is highly sensitive (e.g., a scientific research establishment) to groundborne vibration. Therefore, the proposed project would result in a less than significant incremental contribution to cumulative impacts regarding exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels, and no mitigation would be required.

(c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed project would result in a less than significant incremental contribution to cumulative impacts regarding a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. The proposed project improvements would not result in additional traffic on nearby local access roads to LAUS and some elements of the project improvements result in road closures and reduced lanes that would reduce noise levels within the project area. Due to the temporary and intermittent nature of construction and because none of these cumulative projects are expected to produce long term increase in noise levels from the nature of the projects, the cumulative impact to noise would be less than significant in relation to exposure or generation of noise levels in excess of established standards, and no mitigation would be required.

(d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

The proposed project would result in a less than significant incremental contribution to cumulative impacts in regards to a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. Noise attenuation levels were calculated in accordance with standards established by the City of Los Angeles and with incorporation of the project design features, BMPs compliance with the construction hours stipulated in the City Noise Control Ordinance, cumulative impacts associated with noise during construction would be below the level of significance, and no mitigation would be required.

(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project would result no significant incremental contribution to cumulative impacts regarding exposure of people residing or working in the project area to excessive noise levels due to public airports. The project site is outside of the LAX airport noise contour.

(f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project would result in no significant incremental contribution to cumulative impacts regarding exposure of people residing or working in the project area to excessive noise levels due to private airstrips. The project site is not located within the vicinity of a private airstrip.

3.13.5 Mitigation Measures

No mitigation would be required.

3.13.6 Level of Significance after Mitigation

Impacts would be less than significant.

3.14 Population and Housing

This section of the Environmental Impact Report (EIR) analyzes potential impacts to population and housing from construction, operation, and maintenance of the proposed Forecourt and Esplanade Improvement Project (proposed project). The analysis of population and housing consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

Population and housing was evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines). Population and housing within the project site were evaluated in relation to the Federal Uniform Act, Title 23, the California Housing Element Law, California Government Code §65583(a)(1) and §65584, Senate Bill 375, the California Relocation Assistance Act, the Homeowners and Private Property Protection Act, the City of Los Angeles General Plan (including the Central City and Central City North Community Plans), and the Alameda District Specific Plan; a review of demographic data available from the U.S. Census, the Los Angeles Almanac, Los Angeles County Metropolitan Transportation Authority (Metro), Amtrak, the Los Angeles Homeless Services Authority, and the City of Los Angeles; site reconnaissance conducted in April 2016 and February 2017; as well as a review of related literature and GIS data for the project site.

3.14.1 Regulatory Setting

Federal

Federal Uniform Act (URA) (1970)

The Federal Uniform Act (Uniform Relocation Assistance and Real Property Acquisition Policies Act; 42 U.S. Code [USC] 61), passed by Congress in 1970, is a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The Uniform Act's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects.

Federal Planning Regulations

Title 23 Code of Federal Regulations (CFR) 450.322(e) requires in the development of the regional transportation plan that the Metropolitan Planning Organization (MPO) validate data utilized in preparing other existing modal plans for providing input to the regional transportation plan. In updating the plan, the MPO shall base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. The MPO is required to prepare and approve the Regional Transportation Plan.

State

1969 California Housing Element Law

The California Housing Element Law (California Government Code §65300) requires the Southern California Association of Governments (SCAG) and other regional councils of government in California to determine the existing and projected regional housing needs for persons at all income levels. According to California Government Code §65300, each governing body of a local government in California is required to adopt a comprehensive, long-term general plan for the physical development of the city, city and county, or county. The California Housing Element Law, enacted in 1969, mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community as part of the housing element, one of the seven mandated elements of the local general plan. The California Housing Element Law is implemented by the California Department of Housing and Community Development (HCD), which is responsible for reviewing local governments' housing elements for compliance with state law and providing written comments to the local governments. Using the information provided by local governments in its Housing Element, the HCD determines the regional housing need for each county and allocates funding to meet this need to the council of governments for distribution to its jurisdictions. The HCD also oversees distribution of funding related to the regional housing need by the council of governments to the local governments to ensure that funds are appropriately allocated. The requirements for the Housing Element are delineated in California Government Code Section 65580–65589.9.

Regional Housing Needs Assessment

California Government Code §65583(a)(1) and §65584 require that each Council of Governments consult with the California Division of Housing Policy Development (HPD) and shall determine each region's existing and projected housing need through preparation of a Regional Housing Needs Assessment (RHNA) that allocates a share of the regional housing need to each city, county, or city and county based on an analysis of population and employment trends and documentation of projections and a quantification of the locality's existing and projected housing needs for all income levels, including extremely low income households, as defined in subdivision (b) of Section 50105 and Section 50106 of the Health and Safety Code. The RHNA is a key tool for SCAG and its member governments to plan for this growth. The RHNA quantifies the regional need for housing that is allocated to each jurisdiction for a certain planning period (e.g., in the next RHNA cycle, the period is from 2014 to 2021).

This region's RHNA is produced periodically by SCAG, as mandated by state law, to coincide with the region's schedule for preparing Housing Elements. It consists of two measurements of housing need: (1) existing need and (2) future need for very-low income, low-income, moderate, and above-moderate income categories.

The existing need assessment is based on data from the most recent U.S. Census to measure ways in which the housing market is not meeting the needs of current residents. These variables include the

number of low-income households paying more than 30 percent of their income for housing, as well as severe overcrowding.

The future need for housing is determined primarily by the forecasted growth in households in a community, based on historical growth patterns, job creation, household formation rates, and other factors to estimate how many households will be added to each community over the projection period. The housing need for new households is then adjusted to account for an ideal level of vacancy needed to promote housing choice, maintain price competition, and encourage acceptable levels of housing upkeep and repair. The RHNA also accounts for units expected to be lost due to demolition, natural disaster, or conversion to nonhousing uses. The sum of these factors—household growth, vacancy need, and replacement need—form the "construction need" assigned to each community.

Finally, the RHNA considers how each jurisdiction might grow in ways that will decrease the concentration of low-income households in certain communities. The need for new housing is distributed among income groups so that each community moves closer to the regional average income distribution.

Sustainable Communities and Climate Protection Act of 2008

Senate Bill 375 (SB 375; Chapter 728, Statutes of 2008) focuses on aligning transportation, housing, and other land uses to achieve regional greenhouse gas (GHG) emission reduction targets established under the California Global Warming Solutions Act, also known as Assembly Bill 32 (AB 32). SB 375 requires California Metropolitan Planning Organizations to develop a Sustainable Communities Strategy (SCS) as part of the RTP, with the purposes of identifying policies and strategies to reduce per capita passenger vehicle-generated GHG emissions. The SCS must identify the general location of land uses, residential densities, and building intensities within the region; identify areas within the region sufficient to house all the population of the region; identify areas within the region sufficient to house an eight-year projection of the regional housing need; identify a transportation network to service the regional transportation needs; gather and consider the best practically available scientific information regarding resources areas and farmland in the region; consider the state housing goals; set forth a forecasted development pattern for the region; and allow the regional transportation plan to comply with the federal Clean Air Act (CAA) of 1970 (42 USC § 7401 et seq.). The development pattern in the SCS, when integrated with the transportation network and other transportation measures and policies, must reduce the GHG from automobiles and light duty trucks to achieve the GHG emission reduction targets approved by the California Air Resources Board (CARB). If the SCS does not achieve the GHG emission targets set by CARB, an Alternative Planning Strategy (APS) must be developed to demonstrate how the targets could be achieved.

SB 375 also imposes a number of new requirements on the regional housing needs process. Prior to SB 375, the regional transportation plan and regional housing needs processes were not required to be coordinated. SB 375 now synchronizes the schedules of the RHNA and regional transportation plan processes. The RHNA, which is developed after the regional transportation plan, must also allocate

housing units within the region consistent with the development pattern included in the SCS. Previously, the RHNA determination was based on population projections produced by the Department of Finance. SB 375 requires the determination to be based upon population projections by the Department of Finance and regional population forecasts used in preparing the regional transportation plan. If the total regional population forecasted and used in the regional transportation plan is within a range of 3 percent of the regional population forecast completed by the Department of Finance for the same planning period, then the population forecast developed by the regional agency and used in the Regional Transportation Plan shall be the basis for the determination. If the difference is greater than 3 percent, then the two agencies shall meet to discuss variances in methodology and seek agreement on a population projection for the region to use as the basis for the RHNA determination. If no agreement is reached, then the basis for the RHNA determination shall be the regional population projection created by the Department of Finance.

Existing law requires local governments to adopt a housing element as part of their general plan. Unlike the rest of the general plan, where updates sometimes occur at intervals of 20 years or longer, under previous law the housing element was required to be updated as frequently as needed and no less than every five years. Under SB 375, this period has been lengthened to eight years and timed so that the housing element period begins no less than 18 months after adoption of the regional transportation plan to encourage closer coordination between the housing and transportation planning. SB 375 also changes the implementation schedule required in each housing element. Previous law required the housing element to contain a program which set forth a five-year schedule of to implement the goals and objectives of the housing element. The new law instead requires this schedule of actions to occur during the eight-year housing element planning period, and requires each action have a timetable for implementation.

California Relocation Assistance Act

The California Relocation Assistance Act (Government Code Section 7260 et seq.) establishes uniform policies to provide for the fair and equitable treatment of people displaced from their homes or businesses as a direct result of state and/or local government projects or programs. The California Relocation Assistance Act requires that comparable replacement housing be made available to displaced persons within a reasonable period of time prior to the displacement. Displaced persons or businesses are assured payment for their acquired property at fair market value. Relocation assistance in the form of advisory assistance and financial benefits would be provided at the local level. This includes aid in finding a new home location, payments to help cover moving costs, and additional payments for certain other costs.

Homeowners and Private Property Protection Act

In 2008, California voters approved Proposition 99, the Homeowners and Private Property Protection Act, which amended Section 19 of Article 1 of the California Constitution so that local governments are prohibited from using eminent domain authority to acquire an owner-occupied residence for the

purposes of conveying it to a private recipient, with limited exceptions. Proposition 99 applies only to owner-occupied residences. Cities may still use eminent domain authority to convey multifamily and non-residential property to other private parties.

Local

City of Los Angeles General Plan

The proposed project site is located within the City of Los Angeles and is subject to the goals and policies of the City of Los Angeles General Plan. The Housing Element 2013-2021 of the City of Los Angeles General Plan has established the following relevant goals, objectives, and policies:[1]

- **Goal 1:** A City where housing production and preservation result in an adequate supply of ownership and rental housing that is safe, healthy and affordable to people of all income levels,
  - **Objective 1.1:** Produce an adequate supply of rental and ownership housing in order to meet current and projected needs.
    - **Policy 1.1.3:** Facilitate new construction and preservation of a range of different housing types that address the particular needs of the city's households.
    - **Policy 1.1.4:** Expand opportunities for residential development, particularly in designated Centers, Transit Oriented Districts and along Mixed-Use Boulevards.
  - **Objective 1.2:** Preserve quality rental and ownership housing for households of all income levels and special needs.
    - **Policy 1.2.8:** Preserve the existing stock of affordable housing near transit stations and transit corridors. Encourage one-to-one replacement of demolished units.
  - **Objective 1.3:** Forecast and plan for changing housing needs over time in relation to production and preservation needs.
    - **Policy 1.3.5:** Provide sufficient land use and density to accommodate an adequate supply of housing units by type and cost within the City to meet the projections of housing needs, according to the policies and objectives of the City's Framework Element of the General Plan.

[1] City of Los Angeles Department of City Planning. Adopted 3 December 2013. *Housing Element 2013-2021*. Available at: http://planning.lacity.org/HousingInitiatives/HousingElement/Text/HousingElement_20140321.pdf.

The proposed project site is located within the Alameda District Specific Plan Area,[2] the Central City North Community Plan Area (CPA)[3] and the northeastern edge of the Central City CPA.[4] The following goals, objectives, policies, and programs from these plans are relevant to population and housing:

Alameda District Specific Plan

There are no goals, objectives, or policies in the Alameda District Specific Plan relevant to population and housing.

Central City North Community Plan

- **Goal 1:** A safe, secure, and high quality residential environment for all economic, age, and ethnic segments of the community.
  - **Objective 1-2: T**o locate new housing in a manner which reduces vehicular trips and makes it accessible to services and facilities.
    - **Policy 1.2-1:** Encourage multiple residential development in commercial zones.
      - **Program:** The Plan with the implementation of the General Plan Framework encourages mixed use buildings in commercial zones located within Transit Oriented Districts with additional floor area bonuses.
  - **Objective 1-4:** To promote and insure the provision of adequate housing for all persons regardless of income, age, or ethnic background.
    - **Policy 1.4-1:** Promote greater individual choice in type, quality, price, and location of housing.
      - **Program:** The Plan promotes greater individual choice through its establishment of residential design standards and its allocation of lands for a variety of residential densities.
    - **Policy 1.4-2:** Ensure that new housing opportunities minimize displacement of the existing residents.
      - **Program:** A decision-maker should adopt a finding which addresses any potential displacement of residents as part of any decision relating to the construction of new housing or the demolition of existing housing.

[2] City of Los Angeles Department of City Planning. Effective 18 June 1996. *Alameda District Specific Plan.* A part of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF

[3] City of Los Angeles Department of City Planning. Last Update Adopted December 15, 2000. *Central City North Community Plan.* A part of the Land Use Element of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

[4] City of Los Angeles Department of City Planning. Adopted 8 January 2003. *Central City Community Plan*. A part of the Land Use Element of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/pdf/CCYCPTXT.PDF

Central City Community Plan

- **Objective 1-1:** To promote development of residential units in South Park.
  - **Policy 1-1.1:** Maintain zoning standards that clearly promote housing and limit ancillary commercial to that which meets the needs of neighborhood residents or is compatible with residential uses.

    Program: The Central City Community Plan designates much of South Park and Bunker Hill as High Density Residential with corresponding residential zoning. Program: Designate the Land Use for South Park for residential in all future redevelopment plans.

    Program: Implement the Los Angeles Sports and Entertainment District Specific Plan.

    Program: Implement new housing ordinances and policies as appropriate that encourage multiple family residential development and promote transit-oriented, mixed-income and mixed-use neighborhoods downtown, including the proposed Residential/Accessory Services Zone and the ordinances that would eliminate the habitable room requirements in calculating density.

- **Objective 1-3:** To foster residential development which can accommodate a full range of incomes.
  - **Policy 1-3.1:** Encourage a cluster neighborhood design comprised of housing and services.

    Program: Cluster community facilities, such as elementary schools, day care centers, supermarkets, community police stations, meeting halls, and neighborhood parks to attract residents to Downtown and to create focal points for each neighborhood.

- **Objective 1-4:** To facilitate the conversion of historic buildings in the Historic Core to housing, office, art, and cultural uses in order to attract new residents.
  - **Policy 1-4.1:** Encourage the rehabilitation and adaptive reuse of historic buildings for housing, artist lofts and live-work units.

    Program: implementation of the Adaptive Reuse Ordinance in Central City will facilitate the renovation of historic buildings.

3.14.2 Affected Environment/Existing Conditions

There are no existing residential land uses within the boundary of the project site. The nearest residential property is Mozaic Apartments, which is located adjacent to the Los Angeles Union Station property and the project site on Alameda Street and E. Cesar E. Chavez Avenue (Figure 3.14.2-1, *Existing Residential Use in Project Area*).

Resident Population and Population Growth Rates

According to the most recent Local Profiles Report for the City of Los Angeles that was prepared by the Southern California Association of Governments (SCAG), the 2016 population of the entire City of Los Angeles was 4,040,904, supported by 1,453,271 housing units.[5] From 2000 to 2016, the city's population growth rate was 9.4 percent, higher than the overall Los Angeles County rate of 7.6 percent. SCAG's growth projections for the 2016–2040 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) anticipate a 2020 population of 4,017,000 and a 2040 population of 4,609,400 for the entire City of Los Angeles.[6]

According to the *Connect Us Action Plan*, over 8,500 residents are located within one-third mile of 1st/Central Station and within one-half mile of Los Angeles Union Station.[7] The project site is located within two U.S. Census tracts, 2071.02 to the west and 2060.20 to the east (Figure 3.14.2-2, *Population by Census Tract*).[8] In 2010, the total population within these two census tracts was 10,436 (Table 3.14.2-1, *Population by Census Tract, 2000–2015*). From 2000 to 2010, the total population within the census tracts in the project vicinity, as listed in Table 3.14.2-1, decreased by 6.4 percent, with a total population increase on the west side of Alameda Street and decrease on the east side of Alameda Street. From 2010 to 2015, the U.S. Census Bureau's American Community Survey (ACS) 2015 estimates that the total population in these census tracts has decreased by 5 percent (see Table 3.14-2).

[5] Southern California Association of Governments. May 2017. *Profile of the City of Los Angeles: Local Profiles Report 2017.* Available at: http://www.scag.ca.gov/Documents/LosAngeles.pdf

[6] Southern California Association of Governments. Accessed 20 January 2017. *2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction.* Available at: http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf

[7] Los Angeles County Metropolitan Transportation Authority (Metro) and Southern California Association of Governments (SCAG). 2015. *Connect US Action Plan*. Available at: https://media.metro.net/projects_studies/union_station/images/LAUSMP_Action_Plan_Final_100515.pdf

[8] United States Census Bureau. 2010 Census. *Total Population: 2010 Census Summary File 1. "*Census Tract 2060.20 and Census Tract 2071.02." 2010 SF1 100% Data. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_P1&prodType=table

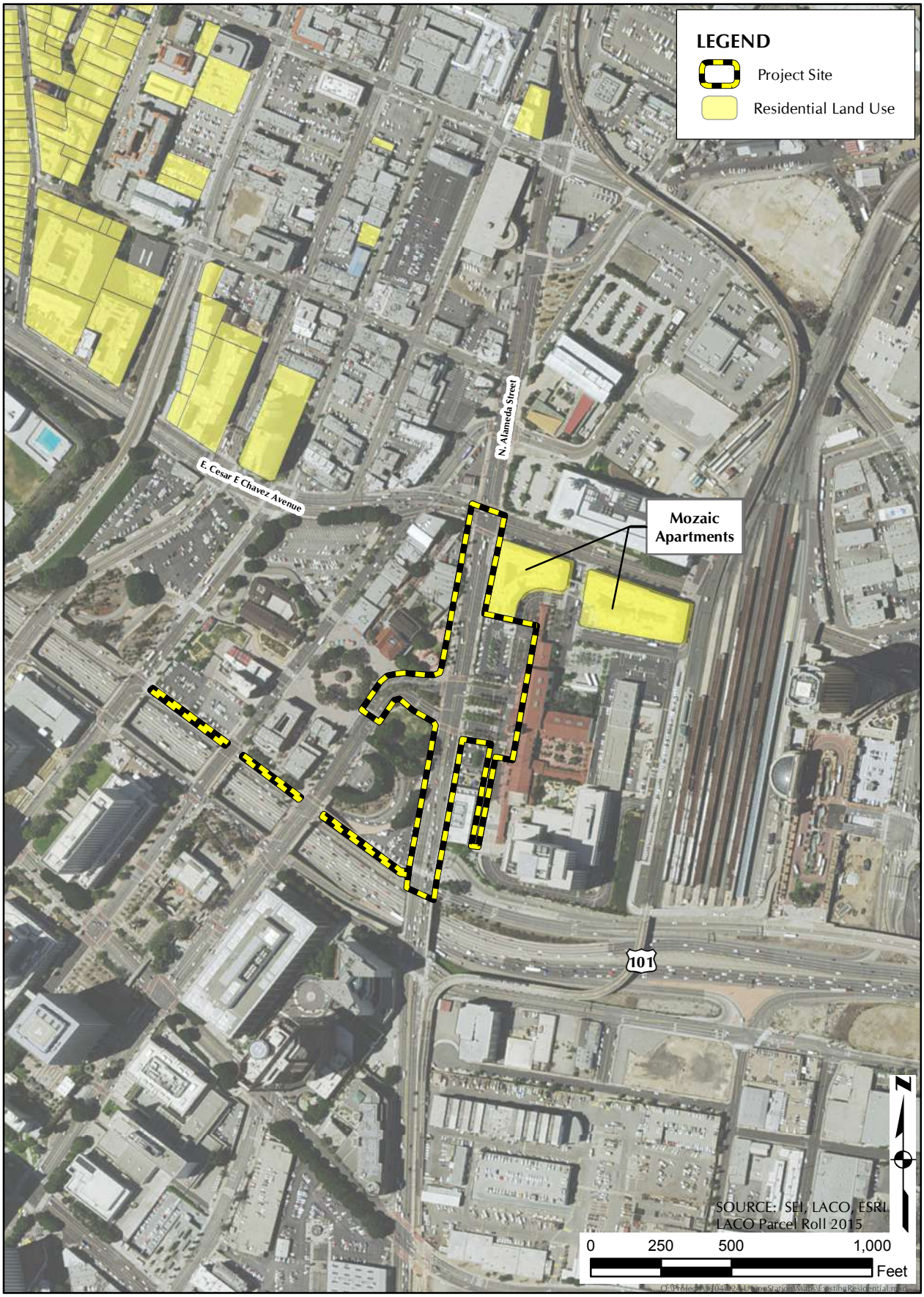


Figure 3.14.2-1. Existing Residential Use in Project Area

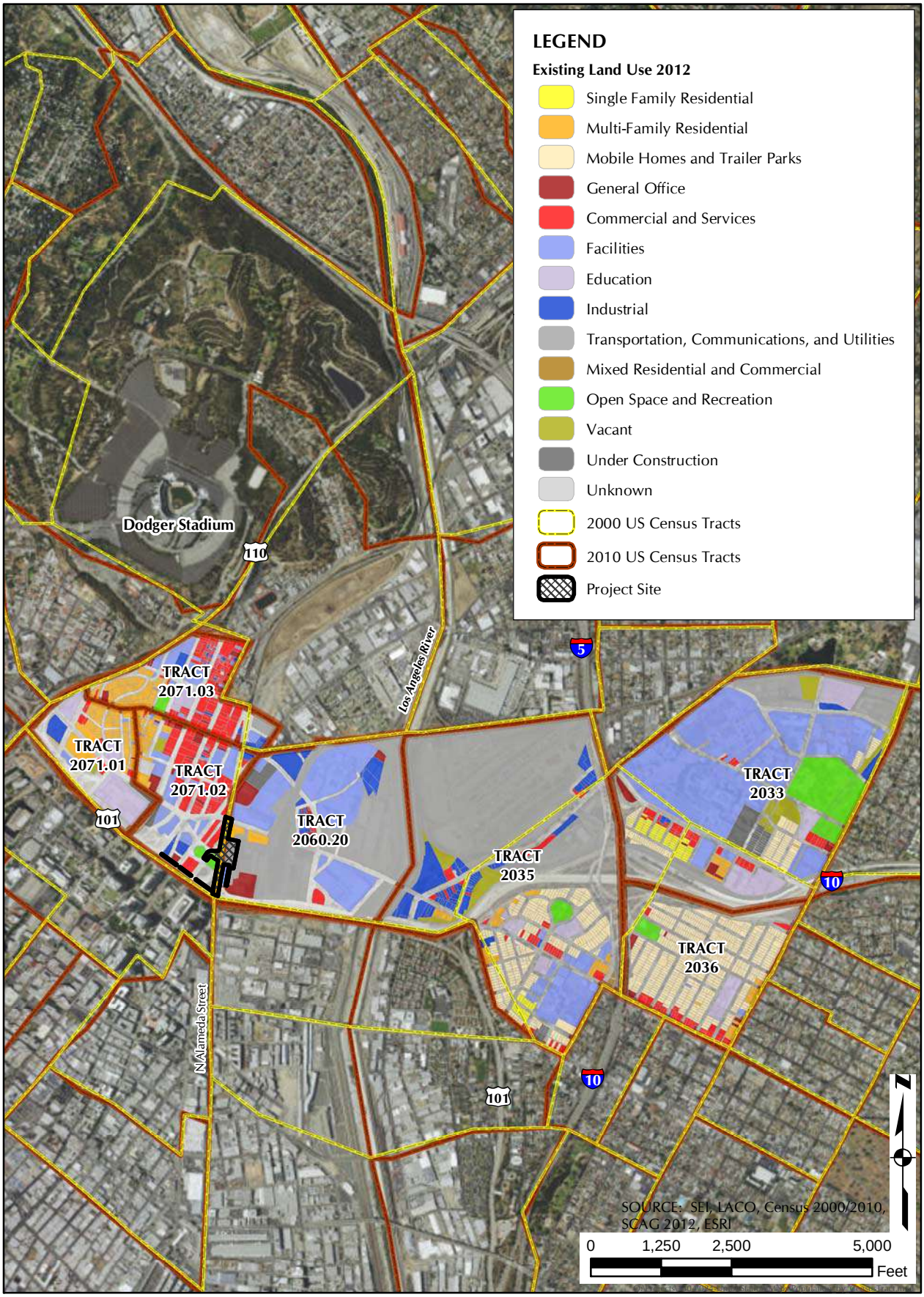


Figure 3.14.2-2. Population by Census Tract

TABLE 3.14.2-1
POPULATION BY CENSUS TRACT, 2000–2015

Census Tract	2000 Census Population[1]	2010 Census Population[1,2,3]	Percent Population Change, 2000-2010	2015 Estimated Population[1,4]	Percent Population Change, 2010-2015
West of Alameda Street - Project Site and Vicinity					
2071.01	5,753	3,047	33.3% Increase	3,137	3.0% increase
2071.02		2,553		2,239	12.3% decrease
2071.03		2,077		2,253	8.5% increase
Subtotal	**5,753**	**7,677**	**33.3% Increase**	**7,629**	**0.6% decrease**
East of Alameda Street - Project Site and Vicinity					
2060.20	10,852	7,883	27.4% Decrease	7,579	3.9% decrease
2033	1,295	2,607	101.3% Increase	2,095	19.6% decrease
2035	3,993	3,064	23.3% Decrease	3,136	2.4% decrease
2036	6,554	5,394	17.7% Decrease	4,854	10.0% decrease
Subtotal	**22,694**	**18,948**	**16.5% Decrease**	**17,664**	**6.8% decrease**
Total Population in Vicinity of Project Site	**28,447**	**26,625**	**6.4% Decrease**	**25,293**	**5.0% decrease**

NOTES:

a. From 2000 to 2010, the 2071 census tract was roughly divided into 2071.01. 2071.02, and 2071.03 (not exactly the same geographic area). The census tract boundaries are the same from 2010 to 2015.

b. From 2000 to 2010, census tracts 2060.20, 2033, 2035, and 2036 were reconfigured (not exactly the same geographic area). The census tract boundaries are the same from 2010 to 2015.

SOURCES:

[1] Social Explorer. Accessed 13 March 2017. *US Demography.* Available at: http://www.socialexplorer.com/explore/maps Data sources: Census 2000, Census 2010, ACS 2015 (5-Year Estimates).

[2] United States Census Bureau. 2010 Census. *Total Population: 2010 Census Summary File 1.* Census Tracts 2060.20, 2071.01, 2071.02, 2071.03, 2033, 2035, and 2036. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_P1&prodType=table

[3] United States Census Bureau. 2010 Census. *DP-1: Profile of General Population and Housing Characteristics: 2010.* 2010 Demographic Profile Data. Census Tracts 2060.20, 2071.01, 2071.02, 2071.03, 2033, 2035, and 2036. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&prodType=table

[4] United States Census Bureau. 2015. *ACS Demographic and Housing Elements.* 2011-2015 American Community Survey 5-Year Estimates. Census Tract 2060.20 and Census Tract 2071.02. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_DP05&prodType=table

Transit Population

Systemwide, the population utilizing transit facilities that pass through Los Angeles Union Station is well over one million per day on weekdays and over 650,000 per day on weekends.[9] On a daily basis, approximately 110,000 travelers and commuters pass through the Union Station transportation hub itself, including Metro's bus and rail lines, Metrolink's five-county commuter rail service, Amtrak's long-distance rail service, and numerous municipal carriers and specialty shuttles with connections to downtown Los Angeles.[10,11] With transit system expansion, Metro is expected to see nearly 197,000 trips per day through Union Station by 2040, a number that does not include passenger boardings from future High Speed Rail ridership, which could push the number well above 200,000 trips per day.[12]

Metro Rail (subway and light rail): In 2016, Metro Rail (Blue Line, Red/Purple Lines, Green Line, Gold Line, Orange Line, Silver Line, and Expo Line) tracked 111.7 million boardings.[13] In December 2015, there was an average of approximately 333,000 daily boardings on weekdays and an average of approximately 185,000 daily boardings on weekends.[14] In December 2016, the daily ridership increased from 2015 by approximately 8 percent to 360,000 on weekdays and by approximately 15 percent to 212,000 on weekends.

Metro Bus: In 2016, Metro Bus tracked 304.2 million boardings.[15] In December 2015, there were an average of approximately 954,000 daily weekday boardings on Metro system buses and an average of approximately 544,000 daily boardings on weekends. In December 2016, the daily ridership decreased from 2015 by approximately 12 percent on weekdays to 855,000 and by approximately 12 percent to 488,000 on weekends.

[9] Metro. Accessed 1 August 2017. *Interactive Estimated Ridership Stats.* Calendar Year: 2016. Period: Annual. Available at: http://isotp.metro.net/MetroRidership/Index.aspx

[10] Metro. Sotero, David. 23 October 2014. *The Source: Transportation News & Views.* "Metro Board Approves Union Station Master Plan, Allowing Near-Term Projects to Go Forward." Available at: http://thesource.metro.net/2014/10/23/metro-board-approves-union-station-master-plan-allowing-near-term-projects-to-go-forward/

[11] Urbanize Media. Sharp, Steven. 20 June 2016. *Urbanize.LA.* "Major Upgrades Slated for Union Station: Link Union Station Would Include an Expanded Passenger Concourse and Run-Through Tracks." Available at: https://urbanize.la/post/major-upgrades-slated-union-station

[12] Metro. 9 October 2015. *Transforming Los Angeles Union Station.* Available at: https://media.metro.net/projects_studies/union_station/images/LAUS_Design_Report-Final_10-9-15.pdf

[13] Metro. Accessed 20 January 2017. *Interactive Estimated Ridership Statistics.* Available at: http://isotp.metro.net/MetroRidership/Index.aspx

[14] Metro. Accessed 20 January 2017. *Interactive Ridership Statistics.* Available at: http://isotp.metro.net/MetroRidership/IndexRail.aspx

[15] Metro. Accessed 20 January 2017. *Interactive Ridership Statistics.* Available at: http://isotp.metro.net/MetroRidership/IndexAllBus.aspx

Metrolink Commuter Rail: Metrolink operates commuter service that serves a five-county area in the Los Angeles Basin with approximately 40,000 daily weekday passengers.[16,17]

Amtrak Long Distance Rail (intercity rail): In fiscal year 2016, there were 1,635,039 Amtrak rail boardings and alightings at Los Angeles Union Station.[18]

Employee Population

Los Angeles Union Station provides employment for well over 18,000 people located at Los Angeles Union Station West (the historic terminal on the western side of the Amtrak and Metrolink tracks) and Los Angeles Union Station East (Patsaouras Transit Plaza and the Metro Union Station Gateway Building on the eastern side of the Amtrak and Metrolink tracks). As of January 2017, Metro employs 9,817 full-time staff at the Metro Union Station Gateway Building as well as a total of 8,454 operations staff, at the Divisions, including:[19]

- 4,397 operators
- 2,370 mechanics
- 849 clerks
- 748 bus and rail transportation and maintenance supervisors
- 90 security guards

Retail Facilities: Retail facilities at Los Angeles Union Station include Ben & Jerry's Ice Cream, Starbucks, Café Crepe, Trimana Fresh Foods Market, Wetzel's Pretzels, Subway, T&Y Bakery, FedEx/UPS/GSO, USPS, Budget Hertz, ATMs, and others.[20]

Commercial Office Space: Amtrak staff offices are located at Los Angeles Union Station West.[21]

[16] Amtrak. Accessed 20 January 2017. *Amtrak Fact Sheet, Fiscal Year 2016: State of California.* Available at: https://www.amtrak.com/ccurl/609/387/CALIFORNIA16.pdf

[17] Metrolink. Accessed 20 January 2017. *Facts & Numbers: Metrolink in Perspective.* Available at: http://www.metrolinktrains.com/agency/page/title/facts

[18] Amtrak. Accessed 20 January 2017. *Amtrak Fact Sheet, Fiscal Year 2016: State of California.* Available at: https://www.amtrak.com/ccurl/609/387/CALIFORNIA16.pdf

[19] Metro. Accessed 20 January 2017. *Facts at a Glance: Agency Info.* Available at: https://www.metro.net/news/facts-glance/

[20] Metro. Accessed 20 January 2017. *Map – Los Angeles Union Station.* Available at: http://media.metro.net/projects_studies/union_station/images/131039_map_unionsta_brochure_v7_rb.pdf

[21] Metro. Accessed 20 January 2017. *Union Station Brochure.* Available at: http://media.metro.net/projects_studies/union_station/images/131039_map_unionsta_brochure_v7_rb.pdf

Existing Housing

In 2010, the total number of housing units within the census tracts in the project vicinity was 6,620, with an occupancy rate of approximately 93 percent (see Figure 3.14.2-2; Table 3.14.2-2, *Housing by Census Tract, 2000–2015*). From 2000 to 2010, the total number of occupied housing units within the census tracts in the project vicinity, as listed in Table 3.14.2-2, has increased by 22.3 percent. The greatest increase in housing units from 2000 to 2010 occurred within census tract 2060.20 with the construction of Mozaic at Union Station Apartments (adjacent to the project site). From 2010 to 2015, the U.S. Census Bureau's American Community Survey (ACS) 2015 estimates that the total number of occupied housing units within these census tracts has increased by approximately 1.2 percent.

There is no existing housing within the boundary of the project site. The nearest housing to the project site is 272 existing multifamily housing units located adjacent to the project site at Mozaic at Union Station Apartments, 888 North Alameda Street, Los Angeles, CA 90012 (see Figure 3.14.2-1).[22]

[22] Male, Laura. 25 April 2016. Communication with Equity Apartments at Mozaic at Union Station Apartments. 888 North Alameda Street, Los Angeles, CA 90012. (844) 609-1676. Website: http://www.equityapartments.com/los-angeles/union-station/mozaic-at-union-station-apartments#/

TABLE 3.14.2-2
HOUSING BY CENSUS TRACT, 2000–2015

Census Tract	2000 Census Total Housing Units[2]	2000 Census Occupied Housing Units[1,2]	2010 Census Total Housing Units[3]	2010 Census Occupied Housing Units[3]	Percent Change in Number of Occupied Housing Units, 2000-2010	2015 Estimated Total Housing Units[4]	2015 Estimated Occupied Housing Units[1]
West of Alameda Street - Project Site and Vicinity							
2071.01	2,294	2,207	1,592	1,442	43.4% Increase	1,768	1,488
2071.02			990	948		1,051	946
2071.03			836	777		847	816
Subtotal	**2,294**	**2,207**	**3,418**	**3,167**	**43.4% Increase**	**3,666**	**3,250**
East of Alameda Street - Project Site and Vicinity							
2060.20	19	14	271	253	1,707.1% Increase	240	232
2033	213	199	479	438	120.1% Increase	478	466
2035	1,210	1,115	1,013	922	17.3% Decrease	1,027	951
2036	1,584	1,496	1,439	1,374	8.2% Decrease	2,102	1,326
Subtotal	**3,026**	**2,824**	**3,202**	**2,987**	**5.8% Increase**	**3,847**	**2,975**
Total in Vicinity of Project Site	**5,320**	**5,031**	**6,620**	**6,154**	**22.3% Increase**	**7,513**	**6,225**

NOTES:

a. From 2000 to 2010, the 2071 census tract was roughly divided into 2071.01. 2071.02, and 2071.03 (not exactly the same geographic area). The census tract boundaries are the same from 2010 to 2015.

b. From 2000 to 2010, census tracts 2060.20, 2033, 2035, and 2036 were reconfigured (not exactly the same geographic area). The census tract boundaries are the same from 2010 to 2015.

SOURCES:

[1] Social Explorer. Accessed 13 March 2017. *Occupied Housing Units.* Available at: http://www.socialexplorer.com/explore/maps Data sources: Census 2000, ACS 2015 (5-Year Estimates).

[2] United States Census Bureau. 2000 Census. *DP-1: Profile of General Demographic Characteristics: 2000. Census 2000 Summary File 1 (SF-1) 100-Percent Data*. Census Tracts 2060.20, 2071.01, 2071.02, 2071.03, 2033, 2035, and 2036 Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_00_SF1_DP1&prodType=table

[3] United States Census Bureau. 2010 Census. *DP-1: Profile of General Population and Housing Characteristics: 2010.* 2010 Demographic Profile Data. Census Tracts 2060.20, 2071.01, 2071.02, 2071.03, 2033, 2035, and 2036. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_DP_DPDP1&prodType=table

[4] United States Census Bureau. 2015. *DP-05: ACS Demographic and Housing Units: 2011-2015 American Community Survey 5-Year Estimates.* Census Tracts 2060.20, 2071.01, 2071.02, 2071.03, 2033, 2035, and 2036. Available at: https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_DP05&prodType=table

Existing People

Although population fluctuates based on number of people per unit and percent occupancy, there are approximately 687 existing residents living adjacent to the project site.[23] As availability changes frequently at the nearby Mozaic at Union Station Apartments, which contains 272 existing housing units (one-bedroom and two-bedroom apartments), the number of residents living near the project site varies.[24]

Site reconnaissance was conducted on April 22, 2016, to characterize the baseline conditions within the vicinity of the project site. There are people living along the streets near the project site. During the site reconnaissance, unauthorized temporary encampments were observed near the project site on a few of the freeway bridges crossing SR-101. To the south of SR-101 are vacant lots that serve as construction staging yards and small unauthorized temporary encampments near the gated industrial uses. The Los Angeles Homeless Services Authority estimates that there are currently 8,069 unsheltered homeless individuals of the 11,860 homeless individuals that have been counted within the approximately 92-square-mile Service Planning Area (SPA) 4, *Metro LA*.[25,26]

Additional site reconnaissance was conducted on February 9, 2017. Unauthorized temporary encampments were observed near the project site on the northern sidewalk along Arcadia Street between Spring Street and Main Street (a row of tents was actively occupied adjacent to a public parking lot). Unauthorized temporary encampments were also observed adjacent to the project site between Alameda Street and Los Angeles Street near the two onramps to U.S. Route 101, including along the southern edge of Father Serra Park.

[23] Based on the assumptions that a studio apartment would house up to one person, a one-bedroom apartment would house up to two people, a two-bedroom apartment would house up to four people, and a 95 percent occupancy level.

[24] Male, Laura. 25 April 2016. Communication with Equity Apartments at Mozaic at Union Station Apartments. 888 North Alameda Street, Los Angeles, CA 90012. (844) 609-1676. Website: http://www.equityapartments.com/los-angeles/union-station/mozaic-at-union-station-apartments#/

[25] Los Angeles Homeless Services Authority. 2016. *2016 Greater Los Angeles Homeless Count.* Available at: https://www.lahsa.org/homeless-count/service-planning-area

[26] Los Angeles Homeless Services Authority. 2016. *2016 Greater Los Angeles Homeless Count.* "Demographic Summary." Available at: https://www.lahsa.org/homeless-count/demographics

3.14.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of three questions when addressing the potential for significant impacts to population and housing. Would the proposed project:

(a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project would result in no impacts to population and housing in regard to inducing substantial population growth in an area, either directly or indirectly. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and the transit population. The proposed project would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses, and because it is limited to landscape improvements and the creation of public open space and pedestrian and cycling improvements. Although these improvements would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, they are not major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth.[27] Therefore, the proposed project would result in no impacts in regard to population growth, and no mitigation would be required.

(b) Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?

The proposed project would result in no impact to population and housing in regard to displacing substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere. There is no housing within the project site. No housing units would be removed due to the proposed project. Therefore, the proposed project would result in no impact to population and housing related to displacement of housing necessitating the construction of replacement housing, and no mitigation would be required.

(c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The proposed project would result in no impacts to population and housing related to the displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere.

[27] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

There are no authorized permanent encampments within the project site, which is entirely composed of existing developed parking, roads, sidewalks, and landscaped areas. A few temporary encampments were observed during site reconnaissance along Arcadia Street adjacent to the project site and on a few of the freeway bridges crossing SR-101 to the south of the project site. However, because these are unauthorized encampments, those individuals could be asked to leave whether or not the project is developed. During site reconnaissance, the project site was not being utilized for temporary encampments. The proposed project would not directly displace people as there is no permanent population residing within the project site. Therefore, there would be no impacts to population and housing in relation to the displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere, and no mitigation would be required.

3.14.4 Cumulative Impacts

The State CEQA Guidelines recommend the consideration of three questions when addressing the potential for significant cumulative impacts to population and housing. Would the proposed project:

(a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The proposed project would not contribute incrementally to cumulative impacts regarding inducing substantial population growth in an area. The proposed project would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. It would accommodate the transportation demand anticipated from the existing and projected population and employment by providing an improved walkability index,[28] increased bicycle parking capacity, and additional transit ridership in the project area. Although the proposed project would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, it would not involve major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading), which would make accessible a previously inaccessible area to support population growth.[29] Therefore, the proposed project would not contribute incrementally to cumulative impacts in regard to population growth, and no mitigation would be required.

[28] Los Angeles Department of City Planning. June 2013. *Health Atlas for the City of Los Angeles.* "Map 53: Walkability Index (2012)." Map available at: http://planning.lacity.org/cwd/framwk/healthwellness/Maps/53.pdf Main document available at: http://healthyplan.la/wordpress/wp-content/uploads/2013/10/Health-Atlas-for-the-City-of-Los-Angeles-July-2013-FINAL-SMALL.pdf

[29] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

(b) Displace substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere?

The proposed project would not contribute to cumulative impacts regarding displacing substantial amounts of existing housing, necessitating the construction of replacement housing elsewhere. There is no housing within the project site. No housing units would be removed due to the proposed project. Therefore, the proposed project would not contribute incrementally to cumulative impacts in regard to displacement of housing necessitating the construction of replacement housing, and no mitigation would be required.

(c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

The proposed project would not contribute incrementally to cumulative impacts regarding displacing substantial numbers of people, necessitating the construction of replacement housing elsewhere. There are no permanent encampments or employment centers in the project site. A few temporary encampments were observed during site reconnaissance along Arcadia Street adjacent to the project site and on a few of the freeway bridges crossing SR-101 to the south of the project site. However, because these are unauthorized encampments, those individuals could be asked to leave whether or not the project is developed. The proposed project would not directly displace people as there is no permanent population residing within the boundaries of the project site. Therefore, the proposed project would not contribute incrementally to cumulative impacts in regard to the displacement of substantial numbers of people, necessitating the construction of replacement housing elsewhere, and no mitigation would be required.

3.14.5 Mitigation Measures

Mitigation would not be required.

3.14.6 Level of Significance after Mitigation

There would be no impact.

3.15 Public Services

This section of the Environmental Impact Report (EIR) analyzes potential impacts to public services from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvement Project (proposed project). The analysis of public services consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

Public services were evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines). A review of related literature and geographic information systems (GIS) data for the project site was performed. Public services within the project site were evaluated in relation to the City of Los Angeles General Plan, Central City Community Plan, Central City North Community Plan, Alameda District Specific Plan, Los Angeles Municipal Code, Los Angeles Fire Code, Los Angeles Fire Department (LAFD) website and Los Angeles Police Department (LAPD) website.

3.15.1 Regulatory Setting

Federal

There are no federal fire, police, school, park, library, and emergency services regulations applicable to the proposed project.

State

There are no applicable state plans or policies for this issue area. The proposed project site is located within the incorporated City of Los Angeles. Fire protection services are provided by the LAFD, not by the California Department of Forestry and Fire Protection (CAL FIRE).

Local

City of Los Angeles Charter

The City of Los Angeles Charter addresses the powers and duties of the LAFD, LAPD, and Recreation and Parks Department in Article V:

- The Los Angeles Fire Department (LAFD) is responsible for the extinguishing and investigation of fires for the protection of lives and property and the enforcement of all laws an ordinances related to the prevention and spread of fires, fire control, and fire hazards within the City and the waters under the jurisdiction of the City.
- The Los Angeles Police Department (LAPD) has the duty and power to enforce the penal divisions of the City Charter, City ordinances, and state and federal law for the purpose of protecting persons and property and for the preservation of the peace of the community.

The City of Los Angeles Recreation and Parks Department has the power and duty to establish, construct, maintain, operate, and control all parks of the City of Los Angeles; all properties acquired by the Department or assigned to its jurisdiction for public recreation; and all recreational facilities, museums, observatories, municipal auditoriums, sports centers and all lands, waters, facilities or equipment set aside or dedicated for recreational purposes and public enjoyment.

City of Los Angeles General Plan

The proposed project site is located within the City of Los Angeles and subject to the goals, objectives, policies, and programs of the City of Los Angeles General Plan. The Safety Element, Service Systems Element – Public Recreation Plan, and Land Use Element (Community Plans) of the City's General Plan contain relevant goals and policies to public services.

The Safety Element of the City General Plan has established the following goals, objectives, and policies relevant to public services:

- **Goal 1: Hazard Mitigation**. A city where potential injury, loss of life, property damage, and disruption of the social and economic life of the City due to fire, water related hazard, seismic event, geologic conditions or release of hazardous materials disasters is minimized.
  - **Objective 1.1**: Implement comprehensive hazard mitigation plans and programs that are integrated with each other and with the City's comprehensive emergency response and recovery plans and programs.
    - **Policy 1.1.1**: Coordination. Coordinate information gathering, program formulation and program implementation between City agencies, other jurisdictions and appropriate public and private entities to achieve the maximum mutual benefit with the greatest efficiency of funds and staff. [All Emergency Operations Organization (EOO) hazard mitigation programs involving cooperative efforts between entities implement this policy.]
  - **Policy 1.1.2**: Disruption reduction. Reduce, to the greatest extent feasible and within the resources available, potential critical facility, governmental functions, infrastructure and information resource disruption due to natural disaster. [All EOO programs involving mitigation of disruption of essential infrastructure, services and governmental operations systems and prepare personnel for quickly reestablishing damaged systems implement this policy.]
  - **Policy 1.1.3**: Facility/systems maintenance. Provide redundancy (back-up) systems and strategies for continuation of adequate critical infrastructure systems and services so as to assure adequate circulation, communications, power, transportation, water and other services for emergency response in the event of disaster related systems disruptions. [All EOO programs that involve provision of backup systems and procedures for reestablishment of essential infrastructure, services and governmental operations which are disrupted implement this policy.]

- **Policy 1.1.5**: Risk reduction. Reduce potential risk hazards due to natural disaster to the greatest extent feasible within the resources available, including provision of information and training. [All programs that incorporate current data, knowledge and technology in revising and implementing plans (including this Safety Element), codes, standards and procedures that are designed to reduce potential hazards and risk from hazards potentially associated with natural disasters implement this policy.]

- **Goal 2: Emergency Response.** A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs.
  - **Objective 2.1:** Develop and implement comprehensive emergency response plans and programs that are integrated with each other and with the City's comprehensive hazard mitigation and recovery plans and programs.
    - **Policy 2.1.6:** Standards/fire. Continue to maintain, enforce and upgrade requirements, procedures and standards to facilitate more effective fire suppression. [All peak load water and other standards, code requirements (including minimum road widths, access, and clearances around structures) and other requirements or procedures related to fire suppression implement this policy.]

      The Fire Department and/or appropriate City agencies shall revise regulations or procedures to include the establishment of minimum standards for location and expansion of fire facilities, based upon fire flow requirements, intensity and type of land use, life hazard, occupancy and degree of hazard so as to provide adequate fire and emergency medical event response. At a minimum, site selection criteria should include the following standards which were contained in the 1979 General Plan Fire Protection and Prevention Plan:
      - Fire stations should be located along improved major or secondary highways. If, in a given service areas, the only available site is on a local street, the site must be on a street which leads directly to an improved major or secondary highway.
      - Fire station properties should be situated so as to provide drive-thru capability for heavy fire apparatus.
      - If a fire station site is on the side of a street or highway where the flow of traffic is toward a signalized intersection, the site should be at least 200 feet from that intersection in order to avoid blockage during ingress and egress.
      - The total number of companies which would be available for dispatch to first alarms would vary with the required fire flow and distance as follows: (a) less than 2,000 g.p.m. would require not less than 2 engine companies and 1 truck company; (b) 2,000 but less than 4,500 g.p.m., not less than 2 or 3 engine companies and 1 or 2 truck companies; and (c) 4,500 or more g.p.m., not less than 3 engine companies and 2 truck companies. [These provisions, in full or in part, shall be deemed deleted from the Safety Element upon incorporation of these or substitute provisions into

the Fire Code, Fire Chief Regulations, other appropriate regulations or procedures or another General Plan element.]

The Safety Element has identified potential hazards within the City of Los Angeles, and the proposed project site has been designated as part of a Selected Urban Fire and Secondary Hazards Area for two selected urban fire and secondary hazards: the presence of natural gas distribution lines along Alameda Street and its location within an industrialized area.

The Public Recreation Plan, a portion of the Service Systems Element of the Los Angeles City General Plan, has established the following standards, policies, and programs relevant to public services in the vicinity of the proposed project site:

- **Standards:**
    - Facilities should be provided at the neighborhood, community, and regional levels. An overall provision of 10 acres of land per 1,000 persons for total recreational facilities is recommended. A minimum of 10% of the total land area should be in public recreation or open space.
    - The location and allocation of acreage for neighborhood and community recreational sites should be determined on the basis of the service radius within residential areas throughout the City. No park site should be diminished in size or removed from any service area unless the required acreage is replaced within that district or unless the need is diminished due to population changes.

City of Los Angeles Municipal Code

The City of Los Angeles Municipal Code addresses public safety services in Chapter V (including Article 7, the Fire Protection and Prevention Code). The Fire Protection and Prevention Plan (Fire Code) of the City of Los Angeles provides an official guide for the construction, maintenance, and operation of fire facilities and is intended to promote fire prevention by maximizing fire safety education and minimizing loss of life through fire prevention programs. Section 57.512.1. establishes the following requirements for industrial development: *Response Distance*, establishes a maximum response distance from a fire station for an high density commercial (Principal Business Districts or Centers) of 3/4 mile and 1 mile to an engine company.[1]

[1] American Legal Publishing Corporation. n.d. Los Angeles Municipal Code. *Chapter V, Article 7,* Section 57.512.1. *Response Distance* Available online at: http://www.amlegal.com/codes/client/los-angeles_ca/

Los Angeles Fire Code[2]

The code establishes regulations affecting or relating to structures, processes, premises and safeguards regarding:

- The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices;
- Conditions hazardous to life, property or public welfare in the occupancy of structures or premises;
- Fire hazards in the structure or on the premises from occupancy or operation;
- Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems;
- Conditions affecting the safety of fire fighters and emergency responders during emergency operations; and
- Such other laws as it may be the duty of the Fire Department to enforce.

Alameda District Specific Plan

The project site is located within the Alameda District Specific Plan area and subject to the goals, objectives, policies, and programs of the Alameda District Specific Plan.[3] The Alameda District Specific Plan provides regulatory controls and incentives for the systematic and incremental execution of that portion of the General Plan that relates to this geographic area and to provide for public needs, convenience, and general welfare as the development of such area necessities; to ensure orderly development and appropriate capacity of public facilities for the intensity and design of development by establishing general procedures for development within the Specific Plan area; to provide continued and expanded development of the site both as a major transit hub for the region and as a mixed-use development in conformance with the goals and objectives of local and regional plans and policies; and to expand the economic base of the City by providing additional employment opportunities and additional revenues to the region.

In particular, the Specific Plan outlines measures for the development of public facilities including Schools, Police Protection, and Fire Protection. These measures include security and crime prevention design features, security patrol measures, public safety, fire access and apparatus design measures, and hydrant requirements.

[2] CALIFORNIA FIRE CODE – Los Angeles Fire Code, CHAPTER 5 – FIRE SERVICE FEATURES. n.d. Available at: http://codes.iccsafe.org/app/book/toc/2014/2014_LA_City_Fire/index.html

[3] Alameda District Specific Plan. Effective 18 Jun3 1996. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF.

Central City North Community Plan

The intent is to achieve economy and efficiency in the provision of services and facilities consistent with standards for environmental quality. The proposed project site is located within the Community Plan Area (CPA) of Central City North and subject to the goals, objectives, policies, and programs of the Central City North Community Plan, a part of the Land Use Element of the City General Plan.[4] The Community Plan seeks to utilize the location, characteristics, and timing of public facility and utility development as a tool in achieving planned land use patterns. The Community Plan has established the following goals, objectives, and policies relevant to public services in the vicinity of the proposed project site:

Schools

In the Central City North CPA, the public schools are administered by the Los Angeles Unified School District (LAUSD). The three LAUSD schools in the plan area are the Castelar Elementary School in Chinatown, Ann Street Elementary School serving the William Mead Housing complex, and the Metropolitan Continuation High School located at Seventh and Wilson Streets. Additional schools outside the plan area boundaries that serve residents in Central City North are Utah Street Elementary School and Hollenbeck Junior High School in Boyle Heights, Ninth Street Elementary School in Central City, Belmont High School in Westlake, and Nightingale Junior High School in Lincoln Heights.

- **GOAL 6:** Appropriate locations and adequate facilities for schools to serve the needs of the existing and future population.
  - **OBJECTIVE 6-1**: to site schools in locations complementary to existing land uses, recreational opportunities and community identity.
    - 6-1.1 Encourage compatibility in school locations, site layout and architectural design with adjacent land uses and community character and, as appropriate, use schools to create a logical transition and buffer between different uses e.g., multiple family residential vs. single family residential.

      Program: Require a decision maker involved in a discretionary review for a proposed school to adopt a finding which supports the application of this policy.
    - 6-1.2 Encourage cooperation between the Los Angeles Unified School District, and the Los Angeles County Parks and Recreation Department to provide recreation facilities for the community.

[4] City of Los Angeles Department of City Planning. December 2000. *Central City North Community Plan.* A part of the Land Use Element of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

Program: The Los Angeles Unified School District, the County's Department of Parks and Recreation, and the City's Department of Recreation and Parks should develop programs to fully utilize each of their respective sites.

- 6-1.4 Proximity to noise sources should be avoided whenever possible.
  Program: Implement appropriate provisions of the City's Noise Element.
  Program: Incorporate noise mitigation measures to reduce adverse environmental impacts in order you comply with CEQA.

Libraries

The Central City North CPA is served by two public libraries. They are the Chinatown Branch Library located in Chinatown at the Castellar Elementary School on West College Street. This 14,000-square-foot library maintains a collection of books and materials in four languages (Chinese, English, Vietnamese, and Spanish). The Little Tokyo Branch Library is located just outside the Plan boundaries at Alameda and Third Street. This library is 2,500 square feet and contains books in both English and Japanese. In addition to the neighborhood branch libraries, the plan area is served by the Central Library in the Downtown Financial District on Fifth Street. The 540,000-square-foot facility contains approximately 2.2 million books and material and is easily accessible from Central City North by way of the Metro Red Line and the DASH bus system.

- **GOAL 7:** Ensure that adequate library facilities are provided for the community's residents.
  - **OBJECTIVE 7-1:** To encourage the City's Library Department to provide adequate library service which responds to the needs of the community.
    - **7-1.1**: Encourage flexibility in siting libraries in mixed-use projects, shopping malls, pedestrian-oriented areas, transit stations, office buildings, and similarly accessible facilities.
      Program: Through the inclusion of this policy in the Plan text, the Plan supports these identified locations as desirable sites for new libraries and recommends that this policy be considered when the Library Department and decision-makers review and approve site for new libraries.

Police Protection

Police protection services are provided by the LAPD. There is one Police Station in Central City North, the Chinatown Substation located at Hill and College Street.

- **GOAL 8:** A community with adequate Police facilities and services to protect the Community's residents from criminal activity reduce the incidence of crime and provide other necessary law enforcement services.
  - **OBJECTIVE 8-1:** To provide adequate police facilities and personnel to correspond with population and service demands in order to provide adequate police protection.

- **8-1.1**: Consult with the Police Department as part of the review of new development projects and proposed land use changes to determine law enforcement needs and demands.

  Program: Require a decision-maker to include a finding as to the impact on police protection service demands of the proposed project or land use change. Currently, the Police Department is consulted with regard to the impacts of plan amendments on law enforcement needs and demands by the plan amendment review process of General Plan Advisory Board, of which the Police Department is a member.

- **OBJECTIVE 8-2:** To increase the community's and the Police Departments ability to minimize crime and provide adequate security.
  - **8-2.1**: Support and encourage community based crime prevention efforts (such as Neighborhood Watch and the Senior Lead Officer Program), through regular interaction and coordination with existing community based policing, foot and bicycle patrols, watch programs, assistance in the formation of new neighborhood watch groups, and regular communication with neighborhood and civic organizations.

    Program: Community oriented law enforcement programs is administered by the Los Angeles Police Department.
  - **8-2.2**: Insure that landscaping around buildings be placed so as not to impede visibility.

    Program: Discretionary land use reviews and approvals by the Department of City Planning with consultation from the Los Angeles Police Department.
  - **8-2.3:** Insure adequate lighting around residential, commercial, and industrial buildings in order to improve security.

    Program: Discretionary land use reviews and approvals by the Department of City Planning with consultation from the Los Angeles Police department.

Fire Protection

Fire protection services are provided by the Los Angeles Fire Department. There are two Fire Stations in the Central City North Plan Area. Fire Station No. 4 is located on Main Street adjacent to the U.S. Post Office Terminal Annex. Fire Station No. 17 is located on Santa Fe Avenue just south of Seventh Street

The Fire Protection and Prevention Plan of the City of Los Angeles provides an official guide to City departments, other governmental agencies, developers, and interested citizens for the construction, maintenance and operation of fire facilities. It is intended to promote fire prevention by maximizing fire safety education and minimizing loss of life through fire prevention programs.

- **GOAL 9:** Protect the community through a comprehensive fire and life safety program.
  - **OBJECTIVE 9-1:** Ensure that fire facilities and fire protection services are sufficient for the existing and future population and land uses of Central City North.
    - **9-1.1:** Coordinate with the Fire Department as part of the review of significant development projects and General Plan Amendments affecting land use to determine the impact on service demands.

Program: Require a decision-maker to include a finding as to the impact on fire service demands for all plan amendments within five years of Plan adoption. This coordination with the Fire Department is currently in effect for projects which are subject to the subdivision process and for plan amendments which must be reviewed by the General Plan Advisory Board which includes representation from the Fire Department.

- **9-1.2:** Encourage the Fire Department to locate fire services facilities in appropriate locations throughout the community in order to maintain safety.
  Program: The Plan Map identifies general locations for the establishment of fire services facilities in the community.

City of Los Angeles Municipal Code

The City of Los Angeles Municipal Code addresses public safety services in Chapter V (including Article 7, the Fire Protection and Prevention Code). The Fire Protection and Prevention Plan (Fire Code) of the City of Los Angeles provides an official guide for the construction, maintenance, and operation of fire facilities and is intended to promote fire prevention by maximizing fire safety education and minimizing loss of life through fire prevention programs. Section 57.09.06 establishes the following requirements for industrial development:

- Maximum response distance to an LAFD Fire Station is 1 mile to an engine company or 1 ½ miles to a truck company.

Where a response distance is greater than the requirement, all structures shall be constructed with automatic fire sprinklers, and additional fire protection shall be provided as required by the Chief.

Central City Community Plan

The proposed project site is located within the CPA of Central City and subject to the goals, objectives, policies, and programs of the Central City Community Plan, a part of the Land Use Element of the City General Plan.[5] The Central City Community Plan has established the following goals, objectives, and policies relevant to public services in the vicinity of the proposed project site:

Schools

Central City contains only one elementary school, the Ninth Street Elementary School. Residents of Central City are also served by Belmont High School in Westlake, and the Belmont Learning Center in Central City West, Castelar Elementary School in Chinatown, and Hollenbeck Junior High School in Boyle

[5] City of Los Angeles Department of City Planning. Accessed 11 December 2016. *Central City Community Plan*. A part of the Land Use Element of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/pdf/CCYCPTXT.PDF

Heights. Miguel Contreras Learning Complex (opened September 5, 2006) and Ramon C Cortines School of Visual & Performing Arts (opened September 9, 2009) also serves the Central City Community Plan area. Other educational institutions located in Central City include the UCLA extension school at the World Trade Center, the Fashion Institute of Design Merchandising (FIDM) located in South Park, Los Angeles Trade and Technical School, and the Abraham Freidman Occupational Center.

- **OBJECTIVE 7-1:** To site schools in locations complementary to existing land uses, recreational facilities, and community identity and as a re-use of historic structures.
  - **7-1.1:** Encourage compatibility in school locations, site layout, and architectural design with adjacent land uses and community character and, as appropriate, use schools to create a logical buffer between different land uses.
    Program: Require that the decision- maker involved in a discretionary review for a proposed school, adopt a finding which supports the application of this objective.
    Program: The Los Angeles Unified School District and the City's Department of Recreation and Parks should develop programs for shared use of school sites for recreation and park sites for education.
  - **7-1.2:** Pursue planning and building code changes allowing the reuse of existing buildings for educational purposes.

Libraries

Central City is served by two libraries, the Central Library and the Little Tokyo Branch Library. The Central Library, in the Financial District on Fifth Street, is a 540,000-square-foot facility containing approximately 2.2 million books and other materials. The Little Tokyo Branch Library is located at Alameda and Third Street. This 2,500-square-foot library contains books and materials in both English and Japanese.

- **OBJECTIVE 8-1:** To assist the City Library Department in providing adequate library service which responds to the needs of the community.
  - **8-1.1:** Encourage flexibility in siting libraries in mixed use projects, pedestrian oriented areas, transit oriented districts, and similarly accessible facilities.
    Program: The Plan supports sites for new libraries as dictated by population demands and recommends that this policy be considered when the Library Department and decision-makers review potential sites for new libraries.
    Program: Floor Area utilized for a library, within projects in pedestrian-oriented areas or in transit-oriented districts, should be exempt from the calculation of total floor area permitted

Police Protection

Police protection services are provided by the LAPD. There are two police stations located in Central City. The Los Angeles Police Department headquarters, relocated from the Parker Center at 150 North

Los Angeles Street in 2009 to a new location at100 W 1st St, Los Angeles, CA 90012. The Central Bureau Police Station is located at 251 East Sixth Street.

- **OBJECTIVE 5-1:** To provide adequate police facilities and personnel to correspond with population and service demands in order to provide adequate police protection.
  - **5-1.1:** Consult with the Police Department as part of the review of significant development projects and General Plan amendments affecting land use to determine the impact on law enforcement service demands.
    Program: Require the decision-maker to include a finding which considers the impact on police service demands of the proposed project or land use plan change. Currently, the Police Department is consulted with regard to impacts of Plan amendment review process of the General Plan Advisory Board of which the Police Department is a member.
  - **5-1.2:** Promote the establishment of Police facilities and programs which provide police protection at a neighborhood level.
    Program: Coordinate with Business Improvement District security patrols. Continue and expand bike patrols, neighborhood beats, or other community-based policing appropriate to the District.

- **OBJECTIVE 5-2:** To inform developers, design professionals, and the public of the possible reduction of criminal opportunities when crime prevention principles are developed during the initial planning stages of a development.
  - **5-2.1:** Promote the safety and security of personal property through proper design and effective use of the built environment which can lead to a reduction in the incidence and fear of crime, reduction in calls for police service, and to an increase in the quality of life.
    Program: Incorporate whenever possible the design guidelines contained in the City's Crime Prevention Through Environmental Design "Design Out Crime" Guidelines and published by the City Planning Department.

Fire Protection

Fire protection services are provided by the LAFD. There are three fire stations located within Central City Plan area. Station No. 3 is located at 108 North Fremont Street, Station No. 9 is located at 430 East Seventh Street, and Station No. 10 is located at 1335 South Olive Street.

The Fire Protection and Prevention Plan of the City of Los Angeles provides an official guide to City departments, other governmental agencies, developers, and interested citizens for the construction, maintenance, and operation of fire facilities. It is intended to minimize loss of life through fire prevention programs by ensuring that fire facilities and protective services are sufficient for the existing and future population and land uses of Central City.

- **OBJECTIVE 6.1:** To ensure that fire facilities and protective services are sufficient for the existing and future population and land uses of Central City.

- **6.1.1:** Coordinate with the Fire Department as part of the review of significant development projects and General Plan Amendments affecting land use to determine the impact on service demands.
  Program: Require the decision-maker to include a finding as to the impact on fire service demands of the proposed project or land use plan change. Currently, the Fire Department is consulted with respect to impacts of fire and life safety needs resulting from proposed subdivision of land or airspace. In addition, Plan amendments are also evaluated through the review process of the General plan Advisory Board of which the Fire Department is a member.

LAPD's Design Out Crime Guidelines

The City of Los Angeles has created techniques known as Crime Prevention Through Environmental Design (CPTED) and initiative known as "Design Out Crime," using the key concepts of CPTED, the City of Los Angeles is one of the first major cities in the nation to institutionalize them comprehensively.

Crime Prevention Through Environmental Design

The Design Out Crime program uses methods to deter crime by changes in the design of buildings and public spaces that involve easy to use steps available to developers, architects, and individuals that can prevent and reduce crime in residential areas, businesses, and neighborhoods.

These steps can include:

- Housing units can be designed so as to allow neighbors to "self-patrol" their environments.
- Lighting and landscaping may be enhanced in parking lots to improve visibility.
- Fences around housing developments can be designed in ways that avoid creating hiding places for criminals.
- Signs can be removed from storefront windows to allow clear views in and out of the store.
- Vines or planted coverings may be placed on walls to deter graffiti.

A task force created by Laura Chick in 1995 developed a set of "Design Out Crime" guidelines, adopted officially by the City Council, for distribution to developers, architects, urban planners and others involved in the design of building projects. The guidelines are also used by City agencies such as the Housing Department as evaluating criteria for projects worthy of City funding. The Police Department's Crime Prevention Unit also consults with private developers to incorporate CPTED techniques into projects.

3.15.2 Affected Environment/Existing Conditions

This section provides the environmental setting for public services in the project site. This section includes information on the following baseline conditions for public services serving the project site, including the LAFD, LAPD, City of Los Angeles Department of Recreation and Parks, LAUSD, Los Angeles

City Public Library (LAPL) system, and local public hospitals. The LAFD,[6] LAPD,[7] Los Angeles Department of Recreation and Parks,[8] LAUSD,[9] and LAPL[10] websites were referenced for this analysis.

Fire Services

The project site's current staffing and service standards are consistent with the applicable requirements for public services related to fire protection services. The LAFD provides fire protection services to the project site. Fire protection services include fire prevention, fire suppression, and life safety services.[11] The LAFD provides Class I fire protection, rescue, and emergency medical services for the citizens of the City of Los Angeles and City of San Fernando through the service of the following five bureaus: Administrative Services Bureau, Training and Support Bureau, Bureau of Emergency Operations, Bureau of Fire Prevention and Public Safety, and Emergency Services Bureau.[12] There are 106 fire stations in the City of Los Angeles.[13] The project site lies within the Central Bureau of the LAFD with a total of 23 fire stations and 2,100 fire personnel.[14] There are two Fire Stations in the Central City North Plan Area. Fire Station No. 4, located on Main Street adjacent to the U.S. Post Office Terminal Annex and Fire Station No. 17, located on Santa Fe Avenue just south of Seventh Street (Table 3.15.2-1, *Existing Fire Stations Serving the Project Site;* Figure 3.15.2-1, *City of Los Angeles Fire Department Stations*).[15] A secondary responder LAFD Fire Station is also located within close proximity of the project site: LAFD Fire Station 3, located 0.8 miles west of the proposed project site.[16]

[6] LAFD. n.d. Los Angeles Fire Department. Available at: http://lafd.org/

[7] LAPD. Accessed 29 April 2016. Los Angeles Police Department. Available at: http://lapdonline.org

[8] City of Los Angeles Department of Recreation and Parks. n.d. Available at: http://www.laparks.org/index.htm

[9] Los Angeles Unified School District. n.d. Available at: http://home.lausd.net/

[10] Los Angeles Public Library n.d. Available at: http://www.lapl.org/

[11] City of Los Angeles City Planning Department. December 2000. Central City North Community Plan, a part of the General Plan of the City of Los Angeles. Available at: http://cityplanning.lacity.org/. Central City North Community Plan available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

[12] City of Los Angeles. Accessed 26 April 2016. City of Los Angeles Departments and Bureaus. Available at: http://www.lacity.org/government/DepartmentsandBureaus/index.htm?laCategory=1962#Fire Main Department website: http://lafd.org/

[13] Los Angeles Fire Department. Accessed 26 April 2016. Fire Stations. Available at: http://lafd.org/find-a-fire-station

[14] City of Los Angeles. Accessed 26 April 2016. City of Los Angeles Departments and Bureaus. Available at: http://www.lacity.org/government/DepartmentsandBureaus/index.htm?laCategory=1962#Fire Main Department website: http://lafd.org/

[15] City of Los Angeles City Planning Department. December 2000. Central City North Community Plan, a part of the General Plan of the City of Los Angeles. Available at: http://cityplanning.lacity.org/. Central City North Community Plan available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

[16] Los Angeles Fire Department. Fire Station Locator. n.d. Available online at: http://lafd.org/find-a-fire-station/275-fire-station-locator

TABLE 3.15.2-1
EXISTING FIRE STATIONS SERVING THE PROJECT SITE

Station	Location	Primary Service Area	Linear Distance to Project Site	Driving Distance to Project Site*
LAFD Station 4	450 East Temple Street Los Angeles, CA 90012	Little Tokyo / Olvera Street / Chinatown Community	0.1 miles north	0.6 miles (4 minutes)
LAFD Station 3	1601 South Santa Fe Ave. Los Angeles, CA 90021	Civic Center / Bunker Hill Community	0.8 miles west	1.3 miles (6 minutes)
LAFD Station 2	450 East Temple Street Los Angeles, CA 90012	Boyle Heights Community	1 mile east	1.5 miles (7 minutes)
LAFD Station 1	1601 South Santa Fe Ave. Los Angeles, CA 90021	Lincoln Heights Community	1 mile southwest	2.0 miles (8 minutes)

NOTE: Coverage of a short distance may be influence by traffic and congestion during peak hours.

* Based on Google Maps directions.

The average full 911 response time to the project site, based on performance from 2007 to 2012, is up to 6 minutes and 50 seconds.[17,18] The project site is not located within a wildfire hazard area.[19] Response time to the project site, based on 2016 metrics, including turn out from the facility and travel time is 5 minutes and 19 seconds.[20]

[17] Los Angeles Times Data Desk. Accessed 26 April 2016. Interactive Map: How Fast is LAFD Where You Live? Available at: http://graphics.latimes.com/how-fast-is-lafd/#15/34.0013/-118.4457

[18] Data based on 1,063 responses within a grid surrounding Los Angeles Union Station, for which the average dispatch time was 1 minute and 51 seconds and average arrival time was 4 minutes and 58 seconds.

[19] City of Los Angeles Department of City Planning. November 1996. Safety Element of the Los Angeles City General Plan. Available at: http://cityplanning.lacity.org/cwd/gnlpln/saftyelt.pdf Safety Element Exhibit D: Selected Wildfire Hazard Areas in the City of Los Angeles. Page 53.

[20] http://www.lafd.org/fsla/stations-map?st=301&address=800%20N%20Alameda%20St%2C%20Los%20Angeles%2C%20CA%2090012&year=2016, accessed 29 April 2016.

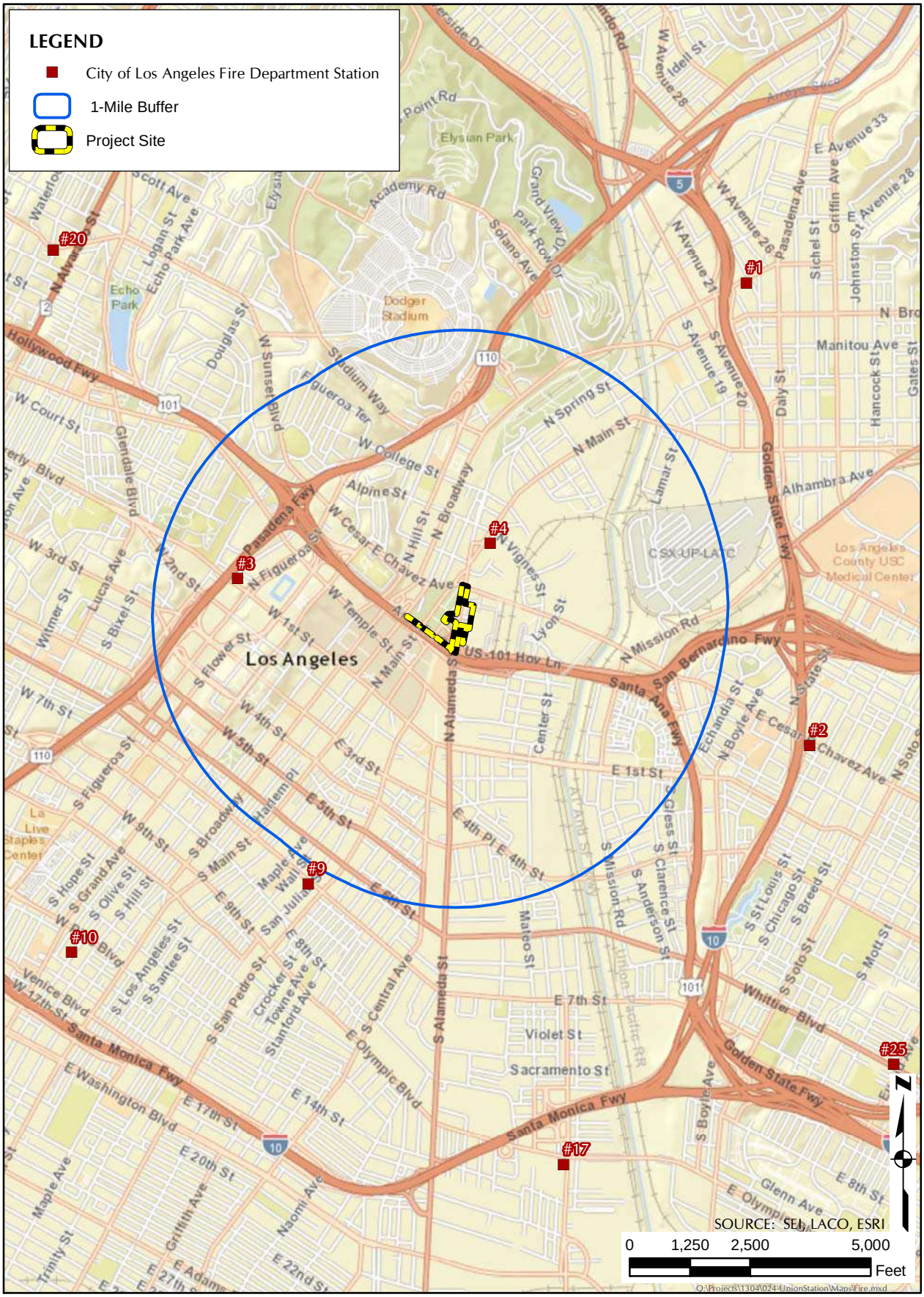


Figure 3.15.2-1. City of Los Angeles Fire Department Stations

Police

The project site's current staffing and service standards are consistent with the applicable requirements for public services related to police protection services. The LAPD is the local law enforcement agency responsible for providing police protection services to the project site and immediate project vicinity. The project site is located within the service area of LAPD's Central Bureau, which oversees operations of five police stations in five communities: Central Community Police Station, Hollenbeck Community Police Station, Newton Community Police Station, Northeast, Community Police Station, Rampart Community Police Station. The project site is within the service area of the Central Community Police Station, located approximately one mile to the southwest. Under the jurisdiction of the Central Bureau, the Central Community Police Station is located at 251 E. 6th Street, Los Angeles, CA 90014.[21] The Central Community Police Station is staffed by approximately 400 sworn and civilian members of the LAPD and is responsible for police operations in downtown Los Angeles. The Central Community Police Station covers approximately 4.5 square miles including the downtown communities of Chinatown, Little Tokyo, South Park, Central City East, Historic Core, Financial District, Artists Lofts, Olvera Street, Jewelry District, the Convention Center, and the Fashion District and a population of 40,000 people.[22] Service ratio for the project site is consistent with the requirements articulated in the City of Los Angeles General Plan. As of 2012, the City of Los Angeles reports an approximate 1 officer per 1,000 resident ratio.[23] A location map depicting the Central Community Police Station in relation to the project site is presented in Figure 3.15.2-2*, Police and Sheriff Stations*. In 2017, an increase of 1.5 officers per 1,000 residents was reported totaling an approximate 2.5 officers per 1,000 residents ratio.[24] The Central Area Community Police Station reports an approximate 10 officers per 1,000 resident ratio.[25]

A comparison of the Central Area Community Police Station and citywide service areas in terms of service population, officers, and crime statistics for 2016 is shown in Table 3.15.2-2, *2016 Police Service Data Comparison*. Based on the Central Area Community Police Station service population of 40,000 residents and approximately 400 sworn officers, the officer-to-resident ratio is approximately 10 officers

[21] Los Angeles Police Department. Accessed 29 April 2016. Central Community Police Station. Available at: http://lapdonline.org/central_community_police_station/content_basic_view/1681

[22] Los Angeles Police Department. Accessed 29 April 2016. Central Community Police Station. Available at:http://lapdonline.org/central_community_police_station/content_basic_view/1681

[23] Federal Beureu of Investigation. Accessed 29 April 2016. Full-time Law Enforcement Employees by City, 2012. Available at: https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/78tabledatadecpdf/table-78-state-cuts/table_78_full_time_law_enforcement_employees_california_by_city_2012.xls

[24] Los Angeles Police Department. n.d. Crime Mapping and COMPSTAT, Citywide Profile. Accessed on February 6, 2017. Available online at: http://www.lapdonline.org/crime_mapping_and_compstat

[25] Los Angeles Police Department. n.d. Crime Mapping and COMPSTAT, Central Area Profile. Accessed on February 6, 2017. Available online at: http://www.lapdonline.org/crime_mapping_and_compstat

per 1,000 residents. Citywide, the ratio is approximately 2.5 officers per 1,000 residents. With regard to crime, the Central Area Community Police Station reported 418 crimes in 2016, while the number of crimes reported Citywide was 12,069 for 2016. Based on the number of officers deployed within the Central Area Community Police Station service area, the number of crimes per officer was 1 to 1 in comparison to a Citywide ratio of 1.2 crimes per officer.

TABLE 3.15.2-2
2016 YTD POLICE SERVICE DATA COMPARISON

Service Area	Square Miles	Population	Sworn Officers	Officers per 1,000 Residents	Crimes	Arrests	Crimes per Officer
Central Area Community Police Station	4.5	40,000	400	10	418	1,384	1
Citywide	472.93	3,962,726	9,935	2.5	12,069	12,091	1.2

SOURCE: Los Angeles Police Department. Accessed 6 February 2017. Crime Mapping and COMPSTAT, Citywide Profile. Available at: http://www.lapdonline.org/crime_mapping_and_compstat

Schools

There are no public schools located within 0.25 mile of the proposed project site; however, there is the Le Petite Academy (private child day-care center and preschool) adjacent to the proposed project site. There are two elementary schools and one continuation high school within the Central City North CPA, all of which are governed by the LAUSD.[26] The LAUSD serves the City of Los Angeles, including the area surrounding the project site within the Central City North CPA. The project site is located within the East Educational Service Center within the LAUSD. Three schools are located within the Central City North CPA: Castelar Elementary School in Chinatown, Ann Street Elementary School serving the William Mead Housing complex, and the Metropolitan Continuation High School located at Seventh and Wilson Streets (Table 3.15.2-3, *Resident Schools within Central City and Central City North CPA*; Figure 3.15.2-3*, Schools Serving the Project Site*).

[26] City of Los Angeles City Planning Department. December 2000. Central City North Community Plan, a Part of the General Plan of the City of Los Angeles. Available online at: http://cityplanning.lacity.org/. Central City North Community Plan available online at: http://planning.lacity.org/complan/central/ccnpage.htm

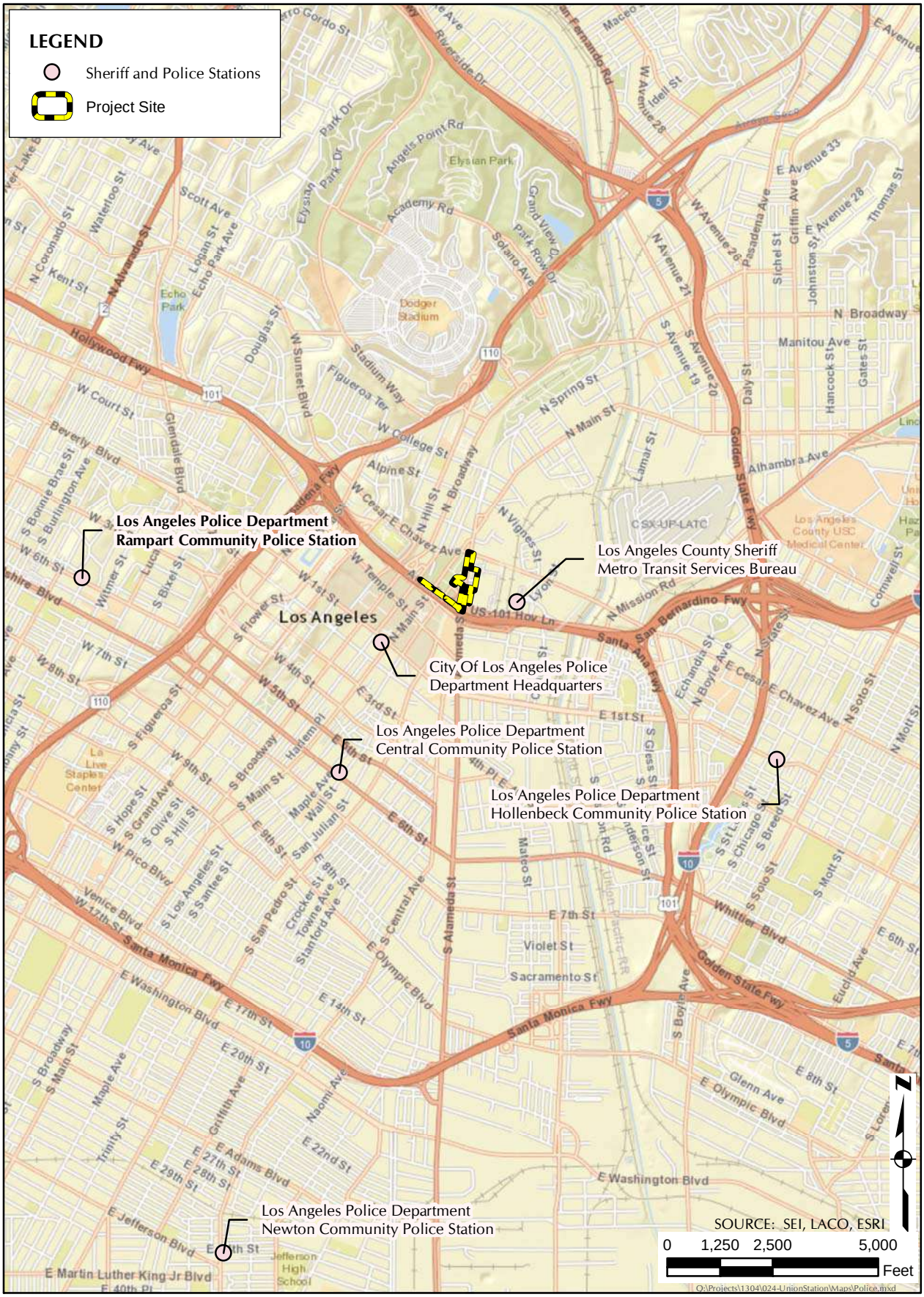


Figure 3.15.2-2. Police and Sheriff Stations

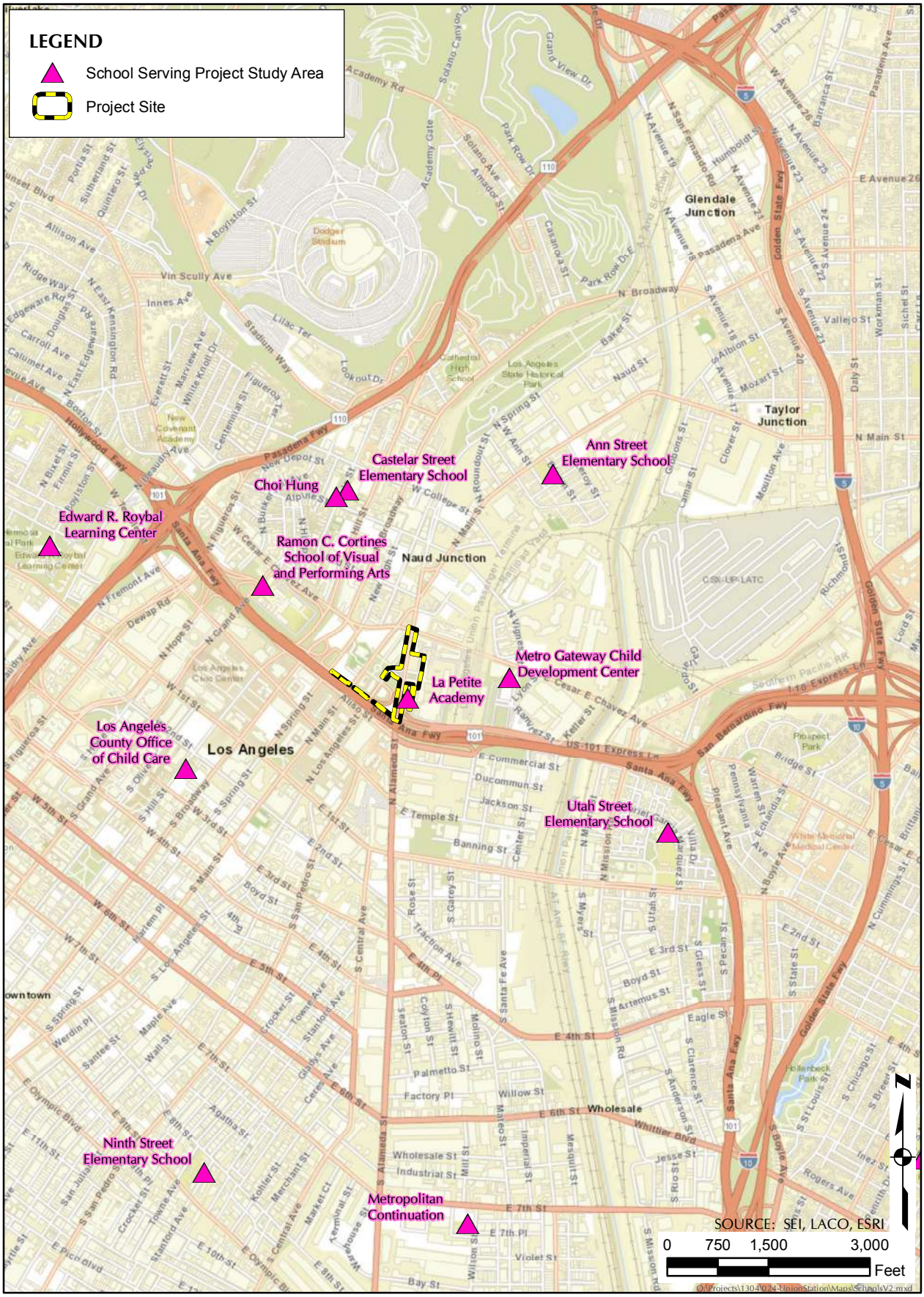


Figure 3.15.2-3. Schools Serving the Project Study Area

TABLE 3.15.2-3
RESIDENT SCHOOLS WITHIN CENTRAL CITY AND CENTRAL CITY NORTH CPA

School	Grade Level	Location	Distance from Project Site	Enrollment Numbers[1]
Ann Street Elementary	K-5	126 Bloom St Los Angeles, CA 90012	Approximately 0.15 miles north	2014–2015 enrollment of 112 students
Castelar Street Elementary	K–5	840 Yale St Los Angeles, CA 90012	Approximately 0.5 mile northwest	2014–2015 enrollment of 656 students,
Ninth Street Elementary School	K–5	835 Stanford Ave Los Angeles, CA 90021	Approximately 1.4 miles south	2014–2015 enrollment of 310 students
Metropolitan Continuation	9–12	727 Wilson St Los Angeles, CA 90021	Approximately 1.4 miles south	2014–2015 enrollment of 171 students

SOURCE:

[1] California Department of Education, Educational Demographics Unit. Accessed 6 May 2016. Enrollment by Grade for2014-15: District Enrollment by Grade. Available at: http://data1.cde.ca.gov/dataquest/

Central City CPA contains only one elementary school: the Ninth Street Elementary School. Residents of Central City are also served by Belmont High School in Westlake, and the Edward R. Roybal Learning Center in Central City West. Other educational institutions located in Central City include the UCLA extension school at the World Trade Center, the Fashion Institute of Design Merchandising (FIDM) located in South Park, Los Angeles Trade and Technical School, and the Abraham Freidman Occupational Center.

Nearby K–12 East Educational Service Center schools that serve residents in Central City North include Utah Street Elementary School and Hollenbeck Junior High School in Boyle Heights, Ninth Street Elementary School in Central City, Belmont High School in Westlake, and Nightingale Junior High School in Lincoln Heights.

The LAUSD administers public schools in the Central City North CPA.[27] During the 2014–2015 school year, total LAUSD enrollment in grades K–12 was 646,683, including:[28]

[27] City of Los Angeles City Planning Department. December 2000. Central City North Community Plan, a part of the General Plan of the City of Los Angeles. Available online at: http://cityplanning.lacity.org/. Central City North Community Plan available online at: http://planning.lacity.org/complan/central/ccnpage.htm

[28] California Department of Education, Educational Demographics Unit. Accessed 6 May 2016. Enrollment by Grade for 2013-14: District Enrollment by Grade. Available at: http://data1.cde.ca.gov/dataquest/

- 311,456 in grades K–5 (elementary school grades)
- 140,461 in grades 6–8 (middle school grades)
- 194,766 in grades 9–12 (high school grades)[29]

Parks

The affected environment/existing conditions for parks is described in Section 3.16, *Recreation.*

Other Public Facilities

The LAPL provides library services within the Central City North CPA. There are three libraries within a 1-mile radius of the project site (Table 3.15.2-4, *Existing Public Libraries in the Project Vicinity*; Figure 3.15.2-4, *Libraries within One Mile of Project Site*). The closest library serving the Central City North CPA is the Los Angeles Public Library – Chinatown Branch located at 639 N. Hill Street.

TABLE 3.15.2-4
EXISTING PUBLIC LIBRARIES IN THE PROJECT VICINITY

Library	Location	Distance from Project Site
Los Angeles Public Library – Chinatown Branch (City)	639 N Hill St Los Angeles, CA 90012	0.25 mile west
Los Angeles Public Library – Little Tokyo Branch (City)	203 S Los Angeles St Los Angeles, CA 90012	0.43 miles south
Los Angeles Public Library – Central (City)	630 W. 5th Street Los Angeles, CA 90071	1 mile southwest

The nearest hospital to the project site is White Memorial Medical Center, a 353-bed not-for-profit, faith-based, teaching hospital located at 1720 East Cesar E Chavez Avenue, approximately 0.8 mile east-southeast of the project site (Table 3.15.2-5, *Hospitals in Project Vicinity*; Figure 3.15.2-5, *Hospitals within Five Miles of Project Site*).[30]

[29] Note: some LAUSD schools vary in grade levels served from the grade levels in the preceding list (i.e., some school extend from grades K–8, and some charter schools provide education in both middle school and high school grades).

[30] Adventist Health. Accessed 6 May 2016. White Memorial Medical Center. Available at: https://www.adventisthealth.org/white-memorial/pages/default.aspx

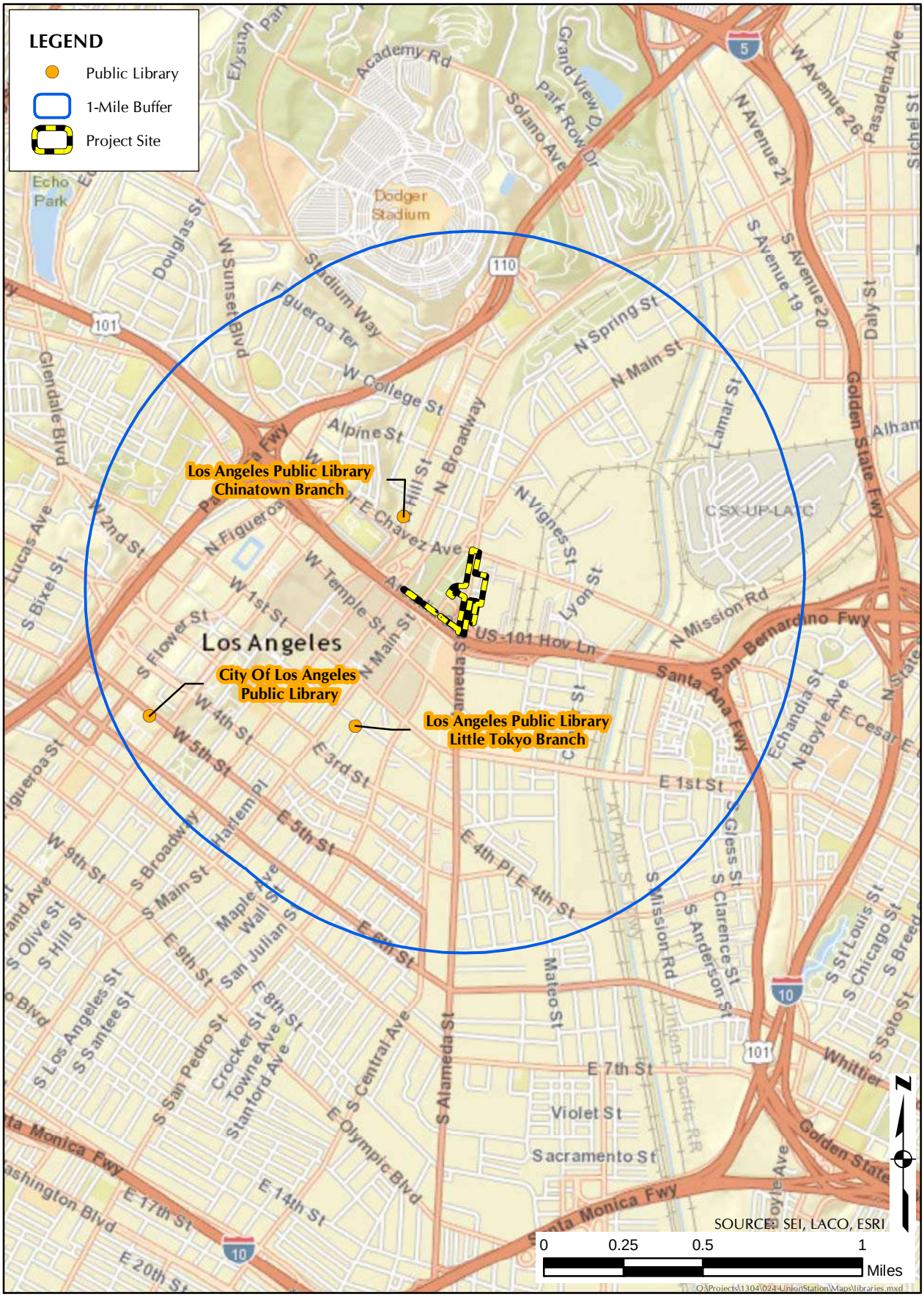


Figure 3.15.2-4. Libraries within One Mile of Project Site

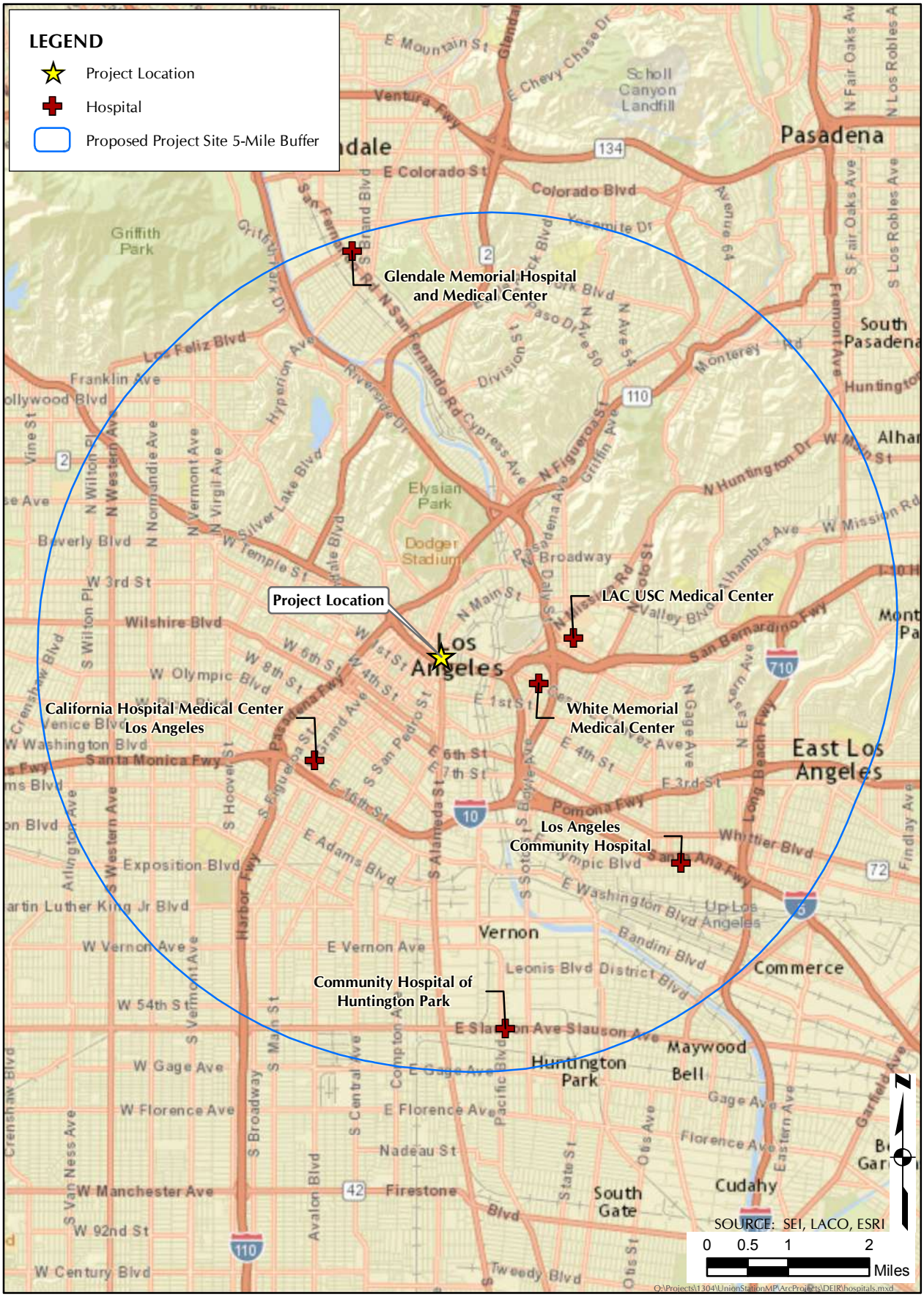


Figure 3.15.2-5. Hospitals within Five Miles of Proposed Project Site

TABLE 3.15.2-5
HOSPITALS IN PROJECT VICINITY

Hospital Name	Hospital Address	Hospital Capacity	Distance from Project Site
White Memorial Medical Center	1720 East Cesar E Chavez Ave. Los Angeles, CA 90033	353 beds[1]	0.8 mile east-southeast
LAC+USC Medical Center	2051 Marengo St Los Angeles, CA 90033	600 beds[2]	1 miles east
California Hospital Medical Center	1338 S Hope St Los Angeles, CA 90015	318 beds[3]	2 mile southwest
Los Angeles Community Hospital	4081 E Olympic Blvd Los Angeles, CA 90023	130 beds[4]	3.5 miles southeast
Community Hospital of Huntington Park	2623 E Slauson Ave Huntington Park, CA 90255	81 beds[5]	4.5 miles south
Glendale Memorial Hospital	1420 S Central Ave Glendale, CA 91204	334 beds[6]	4.8 miles northwest

SOURCE:

[1] Adventist Health. Accessed 6 May 2016. White Memorial Medical Center. Available at: https://www.adventisthealth.org/white-memorial/pages/default.aspx

[2] Health Services Los Angeles Country. Accessed 6 May 2016. LAC+USC Medical Center. Available at: https://dhs.lacounty.gov/wps/portal/dhs/lacusc

[3] Dignity Health. Accessed 6 May 2016. California Hospital Medical Center. Available at: https://www.dignityhealth.org/californiahospital/

[4] Alta Corp. Accessed 6 May 2016. Los Angeles Community Hospital at Los Angeles. Available at: http://www.altacorp.com/altacorp/our-hospitals/lach-menu.html

[5] Avanti Hospitals. Accessed 6 May 2016. Community Hospital of Huntington Park. Available at: http://www.avantihospitals.com/community-hospital-of-huntington-park

[6] Dignity Health. Accessed 6 May 2016. Glendale Memorial Hospital. Available at: https://www.dignityhealth.org/glendalememorial/medical-services

3.15.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of the following question when addressing the potential for significant impact to public services:

(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

1) Fire Protection

The proposed project would result in no impacts to public services related to fire protection. A significant impact would occur if the project required the construction of LAFD facilities to provide an engine company or truck company to serve the project site. The Los Angeles Municipal Code Section

57.512.1, *Response Distance*, establishes a maximum response distance from a fire station for a high-density commercial area (Principal Business Districts or Centers) of 3/4 mile and 1 mile to an engine company.[31] Consistent with the maximum response distance articulated in the City General Plan of 1 mile to an engine company or 1.5 miles to a truck company,[32] primary response to the project site would be provided by LAFD Fire Station No. 4, located 0.1 mile north of the proposed project site.

The proposed project is intended to serve existing and anticipated residents, workers, visitors, and transit population. The project site is located in an urban area with little vegetation, and will not be affected by wildfires. Potential urban fires would be addressed through applicable building codes, a fire protection and suppression system[33] such as; fire hydrants, fire escape assemblies, automatic sprinkler systems, and a fire alarm system that would notify local fire department of fires. A construction traffic management plan would be developed to reduce potential project construction impacts on the delivery of fire protection services. The construction traffic management plan would outline adequate measures to ensure emergency vehicle access during all aspects of project construction. No reduction of Fire Department personnel, equipment, or apparatus access, fire lanes, or fire hydrants in or near the project site would take place due to the construction and operation of the proposed project. Fire lanes located within the project site would be designated and designed for fire and emergency team access pursuant to Section 503.1.4 of the Los Angeles Fire Code. The project site includes fire and emergency access, fire lanes, and hydrants in the required locations as described in the Los Angeles Fire Code, Safety Element of the City of Los Angeles General Plan, and Alameda District Specific Plan.[34,35,36] LAFD access and minimum requirements for supplemental fire protection based on Fire Department response time capabilities, personnel, apparatus availability, and fire-flow would be designed consistent with the Los Angeles Fire Code as described in Chapter 5, *Fires Service Features*.[37] Active patrol of illegal loading, stopping, and parking in fire and emergency access lanes in the project site is performed regularly so

[31] American Legal Publishing Corporation. Los Angeles Municipal Code. *Chapter V, Article 7,* Section 57.512.1. *Response Distance* Available online at: http://www.amlegal.com/codes/client/los-angeles_ca/

[32] City of Los Angeles Department of City Planning. n.d. Safety Element of the Los Angeles General Plan. Available at: http://planning.lacity.org/GP_elements.html

[33] Los Angeles Fire Department. n.d. CHIEF'S REGULATION 4. Available at: http://www.lafd.org/fire-prevention/chiefs-regulation-4

[34] CALIFORNIA FIRE CODE – Los Angeles Fire Code, CHAPTER 5 – FIRE SERVICE FEATURES. Available at: http://codes.iccsafe.org/app/book/toc/2014/2014_LA_City_Fire/index.html

[35] City of Los Angeles Department of City Planning. n.d. Service Systems Element of the Los Angeles General Plan. Available at: http://planning.lacity.org/GP_elements.html

[36] Alameda District Specific Plan. Effective June 18, 1996. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF.

[37] CALIFORNIA FIRE CODE – Los Angeles Fire Code, CHAPTER 5 – FIRE SERVICE FEATURES. Available at: http://codes.iccsafe.org/app/book/toc/2014/2014_LA_City_Fire/index.html

that Fire Department vehicles or emergency vehicles are not prevented from gaining access during a fire or emergency situation.[38] Therefore, the proposed project would result in no impact to public services related to need for new or physically altered facilities to provide fire protection services beyond those contemplated as elements of the project. Therefore, mitigation would not be required.

2) Police Protection

The proposed project would result in no impacts on public services related to police protection. The proposed project area is served by police protective services at a level consistent with the applicable goals, policies, and standards relate to police protection. In addition to standard LAPD requirements, a number of crime prevention and security design features would be implemented to address police issues consistent with the Safety Element of the City of Los Angeles General Plan and Alameda District Specific Plan. Incorporation of a construction traffic management plan would be developed to reduce potential project construction impacts on the delivery of police services. The construction traffic management plan would outline adequate measures to ensure emergency vehicle access during all aspects of project construction. City review of street widths, street lighting, and street signage would be consistent with requirements for the provision of emergency access, and would ensure access is maintained. These project design features would include recommendations included in the LAPD's Design Out Crime Guidelines.[39,40]

As described in the project description, the proposed project has been designed to incorporate security provisions and features pursuant to the City of Los Angeles General Plan including lighting near the forecourt, security to mitigate for any increased security risks due to additional foot traffic, controlled access to buildings, and illumination of public and semipublic spaces to minimize opportunities for criminal activity, thereby reducing the demands placed upon police protection services. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and transit population. The service ratio of 10 sworn officers per 1,000 residents for the Central Area Community Police Station service area consistent with the provisions established in the security element of the City of Los Angeles General Plan and Alameda District Specific Plan and would not warrant the construction of a new Police Station or Substation. Therefore, the proposed project would result in no impact to public services related to police protection services, and no mitigation is required.

[38] Sapphos Environmental, Inc. Site Visit and Field Investigation Notes, Laura Male, February 9, 2017.

[39] City of Los Angeles, Crime Prevention Through Environmental Design: Design Out Crime Guidelines, 1997.

[40] http://www.lapdonline.org/crime_prevention/content_basic_view/8852#1

3) Schools

The proposed project would result in no impacts to public services in relation to schools. The proposed project is a nonresidential use and would therefore not directly generate school-age children. The proposed project would not result in population growth and does not involve the construction of new housing units or businesses. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and transit population. The proposed project is expected to accommodate the transportation demand anticipated from the existing and projected population and employment by providing an improved walkability index,[41] increased bicycle parking capacity, and additional transit ridership in the project area. The project site is served by educational facilities consistent with the provisions established in the City of Los Angeles General Plan, Central City CPA, and Central City North CPA and would not warrant the construction of a new or expanded educational facilities. Protection of the First 5 LA program and Le Petite Academy is addressed in applicable sections related to air quality, noise and traffic. Therefore, the proposed project would result in no impact to public service related to schools, and no mitigation is required

4) Parks

The proposed project would not result in impacts to public services in relation to parks (see Section 3.9, *Recreation*, for information regarding existing parks). There are approximately 194.1 acres of local parkland within the service area radius of the project site. The nearest regional park is Elysian Park, an approximately 576.1-acre park located approximately 0.6 mile north of the project site at 835 Academy Road, Los Angeles, California 90012. Based on the City's standard of 5 to 15 acres for neighborhood parks, there is one neighborhood park located within a 0.5-mile service area radius of the project site: Grand Park, an approximately 9.3-acre park managed by the County of Los Angeles that is located approximately 0.3 mile west of the project site. Based on the City's standard of 15 to 50 acres for community parks, there are six community parks (totaling 178.4 acres) within a 2-mile service area radius of the project site.

The proposed project is a nonresidential use. The proposed project would not result in population growth and does not involve the construction of new housing units or businesses. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and transit population. The proposed project would result in no impacts in regard to including recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the

[41] Los Angeles Department of City Planning. June 2013. *Health Atlas for the City of Los Angeles.* "Map 53: Walkability Index (2012)." Map available at: http://planning.lacity.org/cwd/framwk/healthwellness/Maps/53.pdf Main document available at: http://healthyplan.la/wordpress/wp-content/uploads/2013/10/Health-Atlas-for-the-City-of-Los-Angeles-July-2013-FINAL-SMALL.pdf

environment. There is no existing recreation use within the project site. The proposed project includes the construction of a new civic plaza, including installation of fountains, within the footprint of the existing short-term parking lot within the project site. The site is already developed and heavily graded. Therefore, the proposed project would result in no impact to public services related to parks, and no mitigation is required.

5) Other Public Facilities

The proposed project would result in no impacts to public services in relation to other public facilities, such as libraries and hospitals. The Los Angeles City Public Library provides library services within the Central City North CPA. There are three libraries within a 1-mile radius of the project site. The closest library serving the Central City North CPA is the Los Angeles Public Library – Chinatown Branch located at 639 N. Hill Street. The nearest hospital to the project site is White Memorial Medical Center, a 353-bed not-for-profit, faith-based, teaching hospital located at 1720 East Cesar E Chavez Avenue, located approximately 1.2 miles east-southeast of the project site.[42]

The proposed project is a nonresidential use. The proposed project would not result in population growth and does not involve the construction of new housing units or businesses. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and transit population. As such, the proposed project would not directly generate any substantial new demand for public facilities such as libraries or hospitals. Therefore, the proposed project would result in no impact to public services related to other public facilities, and no mitigation is required.

[42] Adventist Health. Accessed 6 May 2016. White Memorial Medical Center. Available at: https://www.adventisthealth.org/white-memorial/pages/default.aspx

3.15.4 Cumulative Impacts

The State CEQA Guidelines recommend the consideration of the following question when addressing the potential for significant cumulative impact to public services:

(a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

1) Fire Protection

The project will incorporate design features to meet and exceed the Los Angeles Fire Code, Los Angeles Municipal Code related to safety, LAPD's Design Out Crime Guidelines, the City of Los Angeles General Plan guidelines and would result in a net increase in publicly accessible open space. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and transit population. Incorporation of a construction traffic management plan would be developed to reduce potential project construction impacts on the delivery of fire protection services. The construction traffic management plan would outline adequate measures to ensure emergency vehicle access during all aspects of project construction. No reduction of Fire Department personnel, equipment or apparatus access, fire lanes, or fire hydrants in or near the project site would take place due to the construction and operation of the proposed project. Emergency response times are not anticipated to differ from current response times. Therefore, the proposed project would not contribute to cumulative impacts in regards to existing fire protection services, including the construction or expansion of fire protection facilities, and no mitigation would be required.

2) Police Protection

The proposed project has been designed to incorporate security provisions and features pursuant to the City of Los Angeles General Plan and LAPD's Design Out Crime Guidelines including lighting at night near the Forecourt Plaza, security to mitigate for any increased security risks due to additional foot traffic, controlled access to buildings, and illumination of public and semipublic spaces to minimize opportunities for criminal activity, therefore reducing the demands placed upon police protection services. The service ratio of 10 sworn officers per 1,000 residents for the Central Area Community Police Station service area consistent with the provisions established in the security element of the City of Los Angeles General Plan and Alameda District Specific Plan. Therefore, the proposed project would not contribute to cumulative impacts in regards to existing police protection services, including the construction or expansion of police protection services and facilities, response times and no mitigation would be required.

3) Schools

The proposed project is a nonresidential use and would therefore not directly generate school-age children. The proposed project would have no impacts to schools and educational facilities for the project site because there would be no increase in residents within the proposed project area that would necessitate the need for new or substantially altered schools. Therefore, the proposed project would not contribute to cumulative impacts in regards to existing schools, including the construction or expansion of school facilities, and no mitigation would be required.

4) Parks

There is no existing recreation use within the project site. The proposed project includes the construction of a new civic plaza, including installation of a water feature, within the footprint of the existing paved short-term parking lot within the project site, which is already developed and heavily graded. Therefore, the proposed project would not contribute to cumulative impacts in regards to existing parks, including the construction or expansion of parks, and no mitigation would be required.

5) Other Facilities

The proposed project would not result in substantial adverse impacts associated with the provision or need of new or altered facilities, including libraries and hospitals for the project site, because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate the need for new or substantially altered libraries or hospitals. Therefore, the proposed project would not contribute to cumulative impacts to libraries and hospitals in regards to existing facilities, including the construction or expansion of library and hospital facilities, and no mitigation would be required.

3.15.5 Mitigation Measures

No mitigation would be required.

3.15.6 Level of Significance after Mitigation

There would be no impact.

3.16 Recreation

This section of the Environmental Impact Report (EIR) analyzes potential impacts to recreation from construction, operation, and maintenance of the proposed Los Angeles Union Station Forecourt and Esplanade Improvements Project (proposed project). The analysis of recreation consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

Recreation was evaluated in accordance with Appendix G of the 2017 California Environmental Quality Act Guidelines (State CEQA Guidelines). Recreation within the project site and City of Los Angeles' General Plan standard service area radii was evaluated in relation to Section 4(f) of the U.S. Department of Transportation Act, the California Public Park Preservation Act, the City of Los Angeles General Plan (including the Central City and Central City North Community Plans), and the Alameda District Specific Plan; a review of the California Protected Areas Database, the State of California Department of Parks and Recreation website, the County of Los Angeles Department of Parks and Recreation website, the City of Los Angeles Department of Recreation and Parks website, and the City of Los Angeles Department of Public Works Bureau of Engineering website; as well as a review of related literature and geographic information systems (GIS) data for the proposed project site.

3.16.1 Regulatory Setting

Federal

Section 4(f) of the U.S. Department of Transportation Act of 1966 (U.S. DOT Act)

Section 4(f) of the U.S. DOT Act (Public Law 89-670) was enacted as a means of protecting publicly owned public parks, recreation areas, and wildlife/waterfowl refuges as well as historic sites of local, state, or national significance, from conversion to transportation uses. The provision states that the Secretary of the U.S. DOT may approve a transportation project requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge, or land from an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, recreation area, refuge or site) only if:

- There is no feasible and prudent alternative to using that land, and
- The program or project includes all possible planning to minimize harm to the Section 4(f) property.

  - **or –**
- The Section 4(f) use is *de minimis*.

State

California Public Park Preservation Act of 1971

The California Public Park Preservation Act of 1971 (Public Resources Code Section 5400-5409) states that any public agency that acquires public parkland must either continue to operate the property as a public park, or must pay compensation or land that is sufficient to acquire substantially equivalent substitute parkland and facilities or provide substitute parkland of comparable characteristics. The Act is the primary legislation for protecting and preserving public parkland.

Local

City of Los Angeles General Plan

The proposed project site is located within the City of Los Angeles and subject to the City of Los Angeles General Plan. The Public Recreation Plan, a portion of the Service Systems Element of the Los Angeles City General Plan, has established the following standards and programs relevant to recreation in the City of Los Angeles:[1]

- **Standards:**
  - Facilities should be provided at the neighborhood, community, and regional levels. An overall provision of 10 acres of land per 1,000 persons for total recreational facilities is recommended. A minimum of 10 percent of the total land area should be in public recreation or open space.
  - **Local Recreation Standards** (long range):
    - **Neighborhood Recreational Sites** should be provided at a minimum of 2 acres per 1,000 persons. The following standards should apply:
      - The minimum desirable acreage per recreation and park site is 5 acres, ideally 10 acres.
      - The service radius of a neighborhood recreational site is approximately one-half mile.
      - The park space should be located within a neighborhood so that users are not required to cross a major arterial street or highway when walking to the site.

[1] City of Los Angeles Department of City Planning. n.d. *Public Recreation Plan*. Service Systems Element of the Los Angeles General Plan. Available at: http://cityplanning.lacity.org/Code_Studies/GeneralElement/PublicRecreationPlan.pdf

        - **Community Recreational Sites** should be provided at a minimum of 2 acres per 1,000 persons. The following standards should apply:
            - The minimum desirable acreage per recreation and park site is 15 acres, ideally 20 acres.
            - The service radius of a community site is approximately 2 miles.
    - **Community Plan Standards** (short and intermediate range):
        - For neighborhood parks: 1 acre per 1,000 persons; service radius 1 mile.
        - For community parks: 1 acre per 1,000 persons; service radius 2 miles.
- **Programs:**
    - Establish policies to facilitate donation of parks to the City.
    - Lease or acquire unused or abandoned properties suitable for recreational activities.

The proposed project site is located within the Alameda District Specific Plan Area, the Central City North Community Plan Area (CPA) and the northeastern edge of the Central City CPA.

Alameda District Specific Plan

The Alameda District Specific Plan requires the Los Angeles Union Station Site to provide a minimum of 1.7 acres of Open Space, inclusive of the open space provided on the Metropolitan Water District headquarters site, and requires the Terminal Annex Site to provide a minimum of 0.8 acres of Open Space, during Phase I of development.[2] During Phase II of development, prior to issuance of a Project Plan Compliance for a Project, the minimum Open Space Requirements are:

- Los Angeles Union Station Site
    - If project includes over 3,753,700 square feet of floor area, at least 3.5 acres of Open Space prior to issuance of a Project Plan Compliance
    - If project includes over 5,353,700 square feet of floor area, at least 5.3 acres of open space prior to issuance of a Project Plan Compliance
    - If a project includes over 7,053,700 square feet of floor area, prior to issuance of a certificate of occupancy, at least 7.1 acres of Open Space

[2] City of Los Angeles Department of City Planning. Effective June 18, 1996. *Alameda District Specific Plan.* A part of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF

Central City North Community Plan (update under way)

The Central City North Community Plan has established the following goal, objective, policy, and program relevant to recreation in the vicinity of the proposed project site:[3]

- **Goal 4:** Adequate recreation and park facilities which meet the needs of the residents in the Plan Area.
  - **Objective 4-1:** To conserve, maintain and better utilize existing recreation and park facilities which promote the recreational needs of the community.
    - **Policy 4-1.1:** Preserve the existing recreational facilities and park space.
      - **Program:** The plan assists in preserving such facilities and park space by designating city recreation and park facilities as Open Space, which provides such protection.

Central City Community Plan (update under way)

The Central City Community Plan has established the following objectives, policies, and programs relevant to recreation in the vicinity of the proposed project site:[4]

- **Objective 4-1**: To encourage the expansion and additions of open space as opportunities arise.
  - **Policy 4-1.1:** Review existing open space standards in order to expand the range of potential open space resources at the neighborhood and community levels.
    - **Program**: Create or maintain public open space to serve as focal point in each of Downtown's neighborhoods and districts.
- **Objective 4-2:** To maximize the use of the City's existing and envisioned open space network and recreation facilities by providing connections to the open space system.
  - **Policy 4-2.1:** To foster physical and visual links between a variety of open spaces and public spaces Downtown.
    - **Program**: Implement the Metropolitan Transportation Authority's Angel's Walk Pedestrian Master Plan.
- **Objective 4-3:** To encourage increased use of existing park and recreational spaces.
  - **Policy 4-3.1**: Review existing park and recreational space usage in order to determine factors impacting low use of certain facilities.

[3] City of Los Angeles Department of City Planning. Last Update Adopted December 15, 2000. *Central City North Community Plan.* A part of the Land Use Element of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

[4] City of Los Angeles Department of City Planning. Accessed 10 February 2017. *Central City Community Plan*. A part of the Land Use Element of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/pdf/CCYCPTXT.PDF

Program: Conduct site analysis of existing and future spaces and determine any physical, social, or marketing modifications necessary to increase and maximize use of space.

Connect US Action Plan

The Connect US Action Plan is a joint effort between Metro and the Southern California Association of Governments (SCAG) in collaboration with the City and County of Los Angeles with the goal of providing "pedestrians and cyclists with a safe and pleasurable passage to transit between Union Station, 1st/Central Station, and the adjacent historic neighborhoods."[5] Relevant objectives of the Action Plan to recreation include:

2. Transform the environment to benefit people on foot and people on wheels.
3. Provide basic pedestrian and bicycle facilities to allow people to safely walk, bike, and use transit in the study area.
6. Improve access to open spaces, including the Los Angeles River, parks, plazas, and public spaces in the study area.
7. Enhance the first-time visitor's experience between Union Station and neighborhood centers of activity as well as 1st/Central Station.
9. Enable a street to be re-purposed, such as "leftover space" reclaimed for pedestrian or bicycle facilities, special events, and cultural programs.

The Action Plan focuses on enhancing access on foot or bicycle between 1st/Central Station, Little Tokyo, and the Arts District, with a study area comprising a one-mile bicycle radius from the 1st/Central Station, a half-mile pedestrian radius from Los Angeles Union Station's west entrance, and a third-mile pedestrian radius from the new 1st/Central Station location.

3.16.2 Affected Environment/Existing Conditions

Existing Neighborhood and Regional Parks

There are approximately 194.1 acres of local parkland within the City of Los Angeles' General Plan standard service area radii[6] of the project site.[7,8,9,10] Based on the City of Los Angeles standard of 5 to 15

[5] Los Angeles County Metropolitan Transportation Authority (Metro) and Southern California Association of Governments (SCAG). 2015. *Connect US Action Plan.* Available at: https://media.metro.net/projects_studies/union_station/images/LAUSMP_Action_Plan_Final_100515.pdf

[6] Service area radius is ½ mile for neighborhood parks and 2 miles for community parks.

[7] GreenInfo Network. Accessed 10 February 2017. California Protected Areas Data Portal (CPAD). Available at: http://www.calands.org/

[8] City of Los Angeles City Planning Department. February 25, 2014. *General Plan Land Use Map: Central City North Community Plan.* A part of the General Plan of the City of Los Angeles. Available at: http://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

acres for neighborhood parks, one neighborhood park is located within a half-mile service area radius of the project site: Grand Park, an approximately 9.3-acre park managed by the County of Los Angeles approximately 0.2 mile west of the project site (Figure 3.16.2-1, *Existing Local Parks and Recreational Facilities*).[11]

Based on the City of Los Angeles standard of 15 to 50 acres for community parks, there are six community parks (totaling 178.4 acres) within a 2-mile service area radius of the project site (Table 3.16.2-1, *Local Parks within Half-Mile Neighborhood Park Radius and Two-Mile Community Park Radius of Project Site*). Los Angeles State Historic Park, a state park located to the north of the Gold Line Chinatown Station, opened on April 22, 2017.[12]

In addition to neighborhood and community parks, there are three existing and one proposed uncategorized local parks (less than 5 acres in size) within a half-mile neighborhood park service area radius of the project site, totaling 6.4 acres after First and Broadway Civic Center Park is developed.[13] The three existing uncategorized local parks are Los Angeles Plaza Park (including Father Serra Park), which is located adjacent to the western edge of the project site; Alpine Park, located to the northwest of the project site; and City Hall Park, which is located southwest of the project site (see Figure 3.16.2-1). First and Broadway Civic Center Park was purchased by the City of Los Angeles Department of Parks and Recreation and dedicated as parkland in 2013, with demolition of existing buildings on the site occurring in 2014. As of February 2017, the park had not completed the design-build process.[14]

[9] City of Los Angeles City Planning Department. July 9, 2009. *General Plan Land Use Map: Central City Community Plan.* A part of the General Plan of the City of Los Angeles. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

[10] City of Los Angeles Department of Recreation & Parks. Accessed 10 February 2017. *Facility Locator: search for facilities within a 5-mile radius of 800 N. Alameda Street, Los Angeles, CA*. Available at: http://raponline.lacity.org/maplocator/index.cfm?lng=-118.23750139999999&lat=34.056116&radius=5&filter=All&address=800%20N%20Alameda%20St%2C%20Los%20Angeles%2C%20CA%2090012

[11] GreenInfo Network. Accessed 10 February 2017. California Protected Areas Data Portal (CPAD). Available at: http://www.calands.org/

[12] California Department of Parks and Recreation. Accessed 10 February 2017. *Los Angeles State Historic Park*. Available at: http://www.parks.ca.gov/?page_id=22272

[13] City of Los Angeles Department of Public Works, Bureau of Engineering. Accessed 10 February 2017. *Design Competition Exhibit: First and Broadway Park Design Competition*. Available at: http://eng.lacity.org/projects/fab/design_competition_exhibit.htm

[14] City of Los Angeles Department of Public Works, Bureau of Engineering. Accessed 10 February 2017. *Design Competition Exhibit: First and Broadway Park Design Competition*. Available at: http://eng.lacity.org/projects/fab/design_competition_exhibit.htm

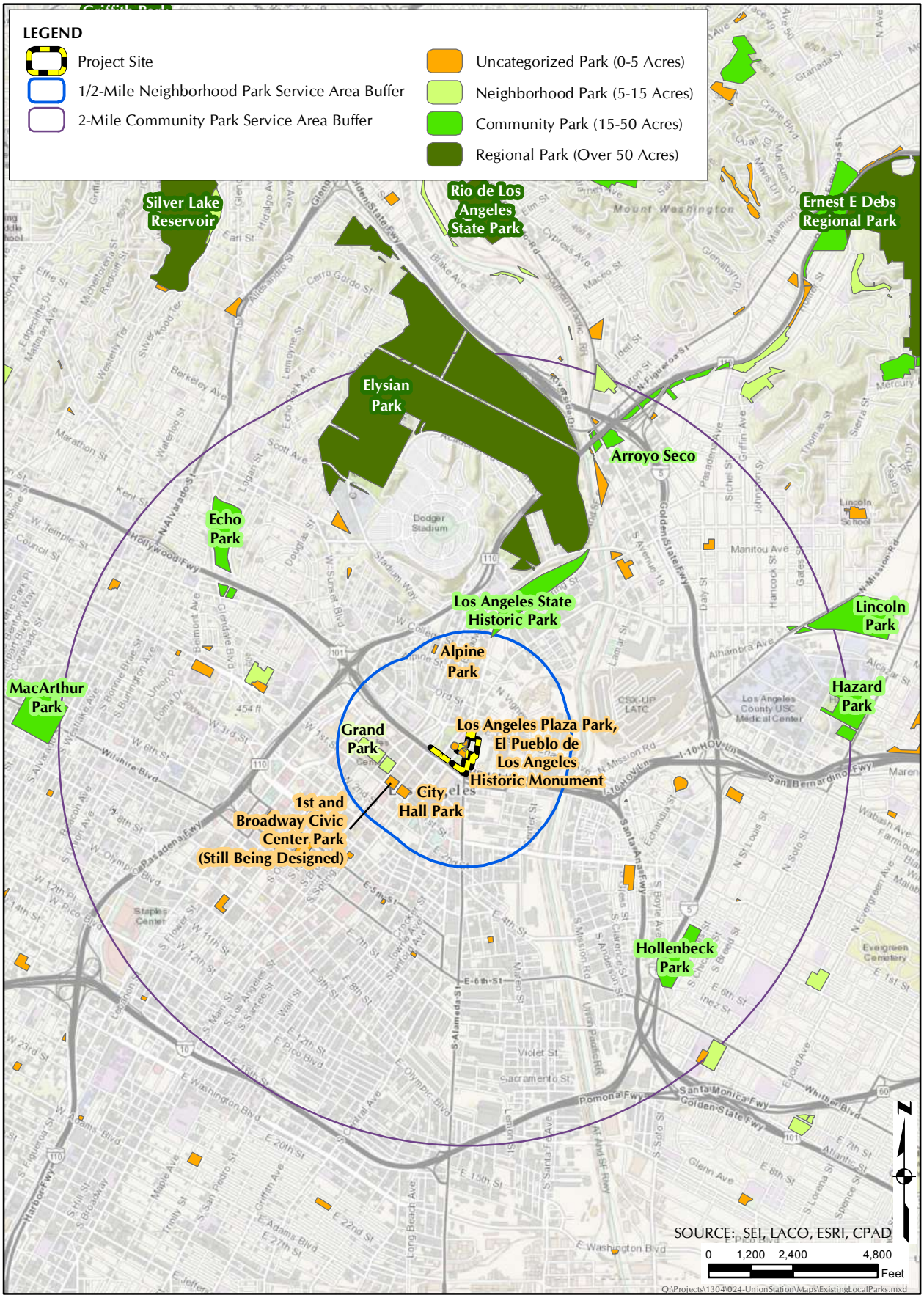


Figure 3.16.2-1, Existing Local Parks and Recreational Facilities

TABLE 3.16.2-1
LOCAL PARKS WITHIN HALF-MILE NEIGHBORHOOD PARK RADIUS AND TWO-MILE COMMUNITY PARK RADIUS OF PROJECT SITE

Park Type (Based on City General Plan)	Park Name[2]	Park Management Agency[2]	Park Address[1]	Park Size (Acres)[2]	Distance from Project Site (Miles)[2]
Within Half-Mile Radius of Project Site:					
Uncategorized; < 5 acres	Los Angeles Plaza Park (includes El Pueblo de Los Angeles Historic Monument, Placita de Dolores, and Father Serra Park)[3]	City of Los Angeles	125 Paseo De La Plaza Los Angeles, CA 90012	2.0	Adjacent to western edge of project site
Uncategorized; < 5 acres	City Hall Park	City of Los Angeles	200 North Main Street Los Angeles, CA 90012	1.9	0.3 mile SW
Uncategorized; < 5 acres	First and Broadway Civic Center Park (park still in design phase)[4]	City of Los Angeles Department of Recreation and Parks	217 W. 1st Street Los Angeles, CA 90012	2.0[3]	0.3 mile SW
Uncategorized; < 5 acres	Alpine Park (at Alpine Recreation Center)	City of Los Angeles	817 Yale Street Los Angeles, CA 90012	0.5	0.5 mile NW
Neighborhood park	Grand Park	County of Los Angeles	200 N. Grand Ave. Los Angeles, CA 90012	9.3	0.2 mile SW
Within Two-Mile Radius of Project Site:					
Community park	Echo Park	City of Los Angeles	1632 Bellevue Ave. Los Angeles, CA 90026	26.7	1.3 miles NW
Community park	Los Angeles State Historic Park	California Department of Parks and Recreation	1245 N. Spring Street Los Angeles, CA 90012	32.0	0.5 miles NNW
Community park	Lincoln Park	City of Los Angeles	3501 Valley Blvd. Los Angeles, CA 90031	43.3	1.7 miles NE
Community park	Hazard Park	City of Los Angeles	2230 Norfolk St. Los Angeles, CA 90033	24.2	1.8 miles E
Community park	Hollenbeck Park	City of Los Angeles	415 S. St. Louis St. Los Angeles, CA 90033	20.5	1.4 miles SE
Community park	MacArthur Park	City of Los Angeles	2230 W. 6th St., Los Angeles, CA 90057	31.7	1.9 miles W
Total local park acres within park service areas (half-mile for neighborhood parks and two miles for community parks)				**194.1 acres**	

TABLE 3.16.2-1
LOCAL PARKS WITHIN HALF-MILE NEIGHBORHOOD PARK RADIUS AND TWO-MILE COMMUNITY PARK RADIUS OF PROJECT SITE

Park Type (Based on City General Plan)	Park Name[2]	Park Management Agency[2]	Park Address[1]	Park Size (Acres)[2]	Distance from Project Site (Miles)[2]

SOURCE:

[1] City of Los Angeles Department of Recreation & Parks. Accessed 10 February 2017. Facility Locator: Search for All Facilities within 5-Mile Radius of 888 N. Alameda Street, Los Angeles. Available at: http://raponline.lacity.org/maplocator/index.cfm?lng=-118.23572200000001&lat=34.057135&radius=5&filter=All&address=888%20n%20alameda%20street%2C%20los%20angeles

[2] GreenInfo Network. Accessed 10 February 2017. California Protected Areas Data Portal (CPAD). Available at: http://www.calands.org/

[3] City of Los Angeles Department of Recreation and Parks. Accessed 9 March 2017. *Los Angeles Plaza Park (a.k.a. Father Serra Park*). Available at: http://www.laparks.org/park/los-angeles-plaza

[4] City of Los Angeles Department of Public Works, Bureau of Engineering. Accessed 10 February 2017. *Design Competition Exhibit: First and Broadway Park Design Competition*. Available at: http://eng.lacity.org/projects/fab/design_competition_exhibit.htm

Based on the City of Los Angeles definition of a regional park as a park over 50 acres in size, there are over 280 regional parks (approximately 322,775 acres of regional parkland) within a 25-mile radius of the project site, including a portion of the Angeles National Forest (see Figure 3.16.2-2, *Existing Regional Parks and Recreational Facilities*).[15,16] The nearest regional park is Elysian Park, an approximately 576.1-acre park located approximately 0.8 mile north of the project site at 835 Academy Road, Los Angeles, California 90012.[17,18]

[15] GreenInfo Network. Accessed 10 February 2017. California Protected Areas Data Portal (CPAD). Available at: http://www.calands.org/

[16] City of Los Angeles Department of City Planning. n.d. *Public Recreation Plan. Service Systems Element of the Los Angeles General Plan*. Available at: http://cityplanning.lacity.org/Code_Studies/GeneralElement/PublicRecreationPlan.pdf

[17] GreenInfo Network. Accessed 10 February 2017. *California Protected Areas Data Portal (CPAD). Available at:* http://www.calands.org/

[18] City of Los Angeles Department of Recreation & Parks. Accessed10 February 2017. Parks. Available at: http://www.laparks.org/parks

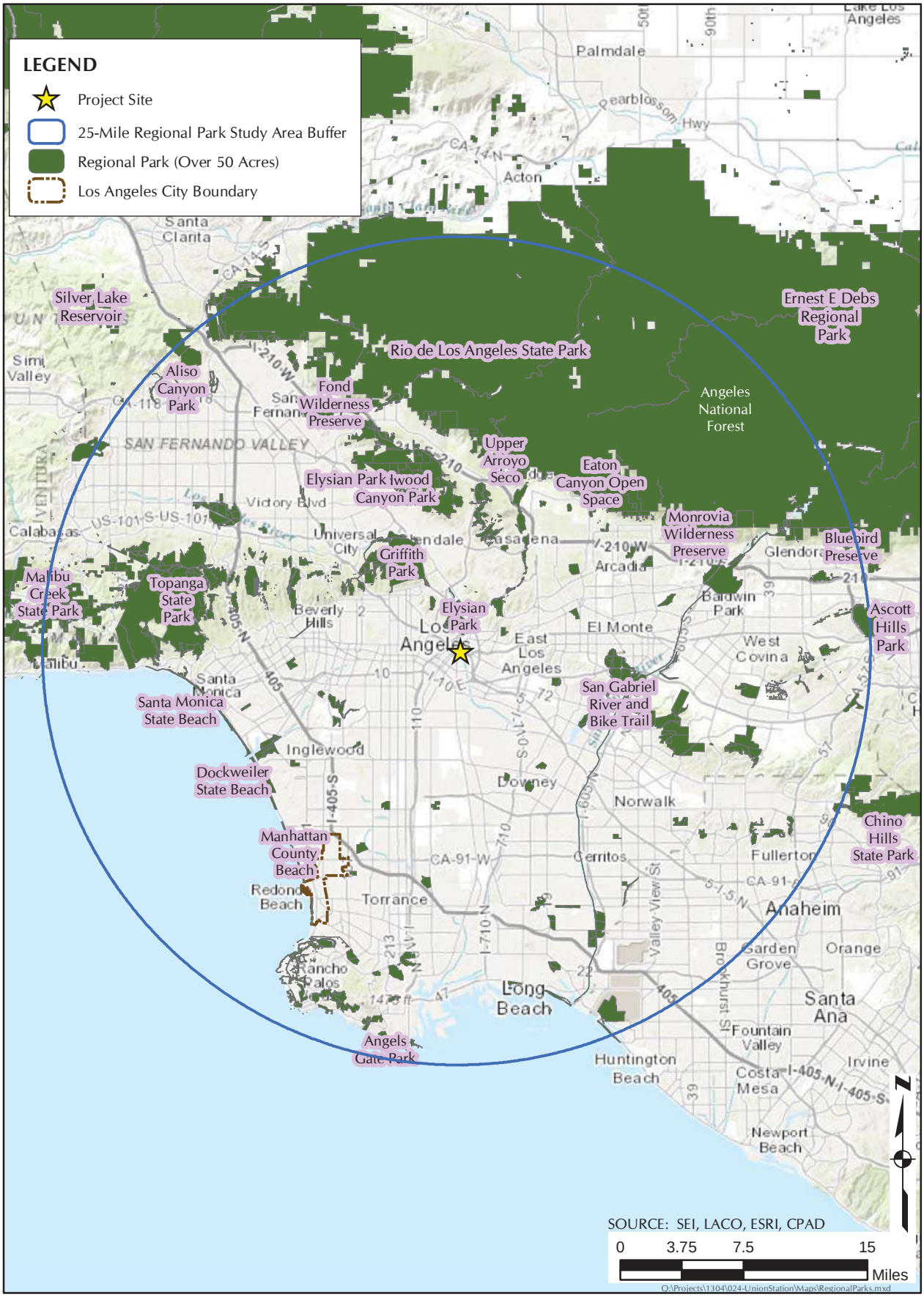


Figure 3.16.2-2. Existing Regional Parks and Recreational Facilities

Existing Ability to Meet Local and Regional Recreation Standards

According to the Plan for a Healthy Los Angeles, a Health and Wellness Element of the City of Los Angeles General Plan, in 2010, the Park Level of Service in the Central City North CPA was 1 to 3 acres per 1,000 residents, and the Park Level of Service in the Central City CPA was less than 1 acre per 1,000 residents.[19] The Plan for a Healthy Los Angeles, informed by the data driven Health Atlas, evaluated the park level of service and park access conditions within the City by CPA in order to establish General Plan goals, policies, objectives and programs to create opportunities for healthful living in the City of Los Angeles.[20] According to the Health Atlas Report, in 2012 the Central City North CPA had a park level of service of 1.3 acre per 1,000 residents and the Central City CPA had a park level of service of 0.4 acre per 1,000 residents, lower than the City of Los Angeles standard minimum of 2 acres per 1,000 residents and recommended provision of 10 acres per 1,000 residents.[21] Despite the deficiency in parkland acreage, 57 percent of the population of the Central City North CPA and 82 percent of the population of the Central City CPA were located within a half-mile walking distance of a park in 2010, which shows adequate access to parkland within the Central City CPA and a need for greater access to parkland within the Central City North CPA.[22]

3.16.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of two questions when addressing the potential for significant impact to recreation:

(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed project would result in no impacts in regard to increasing the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical

[19] City of Los Angeles Department of City Planning. March 2015. *Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan.* Available at: http://planning.lacity.org/cwd/gnlpln/PlanforHealthyLA.pdf

[20] City of Los Angeles Department of City Planning, Raimi & Associates, County of Los Angeles Department of Public Health, et al. June 2013. *Health Atlas for the City of Los Angeles*. Available at: http://cityplanning.lacity.org/Cwd/Framwk/healthwellness/text/HealthAtlas.pdf

[21] City of Los Angeles Department of City Planning, Raimi & Associates, County of Los Angeles Department of Public Health, et al. June 2013. *Health Atlas for the City of Los Angeles. Section 7: Land Use*. Available at: http://cityplanning.lacity.org/Cwd/Framwk/healthwellness/text/HealthAtlas.pdf

[22] City of Los Angeles Department of City Planning, Raimi & Associates, County of Los Angeles Department of Public Health, et al. June 2013. *Health Atlas for the City of Los Angeles. Section 7: Land Use*. Available at: http://cityplanning.lacity.org/Cwd/Framwk/healthwellness/text/HealthAtlas.pdf

deterioration of the facility would occur or be accelerated. The proposed project would result in a net increase in publicly accessible open space. The creation of open space results from decommissioning of parking and a single lane of traffic (for example, creating a new forecourt area with an outdoor seating area, a new esplanade along Alameda Street, and expanding sidewalks on both sides of Alameda Street into the roadway and creating a shared tree-lined multi-use path for both bicyclists and pedestrians on the east side of Alameda Street). Consistent with the goals of the Southern California Association of Governments 2016-2040 Regional Transportation Plan / Sustainable Communities Strategy, the proposed project would provide amenities to serve existing and projected multi-modal transit users, cyclists, and pedestrians. The proposed project would not increase the number of residents or workers in the area.

Metro Art has integrated a diverse range of site-specific artworks into the growing Metro system, improving the quality of transit environments and creating a sense of place. From photography installations to onboard posters, art tours and live performances, sculptures and murals, this multifaceted approach adds vibrancy to L.A.'s communities. Examples of site-specific artworks integrated into LAUS include iconic murals, mosaics, sculptural seating, grillwork fencing, multimedia works and the creation of two gallery spaces dedicated to rotating displays. In addition, for the past 5 years, Metro Art Presents has provided frequent free cultural events at Historic Union Station featuring a range of collaborations with artists and arts organizations, including: film screenings; poetry readings; and live music and dance performances by jazz, swing, salsa and folk bands. These recreational opportunities have been enjoyed by thousands of residents and visitors. It is anticipated that cultural programming will be extended into the project once constructed, and will further position LAUS as a world-class (arts and cultural) destination providing an exceptional passenger experience at the center of Metro's expanding transit system. Therefore, rather than increasing the burden on surrounding facilities, it would increase available open space and thus reduce the burden on existing neighborhood and regional parks. Therefore, the proposed project would result in no impacts in regard to increased use of existing neighborhood and regional parks or other recreational facilities, and no mitigation is required.

(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project would result in no impacts in regard to including recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. There is no existing recreation use within the project site. The proposed project includes the construction of a new forecourt area, including installation of a water feature, within the footprint of the existing short-term parking lot within the project site. Therefore, the proposed project would result in no impacts in regard to construction or expansion of recreational facilities, and no mitigation is required.

3.16.4 Cumulative Impacts

The State CEQA Guidelines recommend the consideration of two questions when addressing the potential for significant cumulative impact to recreation:

(a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The proposed project would not contribute incrementally to cumulative impacts regarding increasing the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. The proposed project would not result in impacts to recreation. Although the proposed project would improve the convenience of accessing Los Angeles Plaza Park (including Father Serra Park) from transit facilities at Los Angeles Union Station across Alameda Street, the proposed project would not make accessible a previously inaccessible area to support population growth.[23] Therefore, the proposed project would not contribute incrementally to cumulative impacts, and no mitigation is required.

(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project would not contribute incrementally to cumulative impacts regarding including recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. The proposed project would not result in impacts to recreation. The proposed project includes the construction of a new forecourt, including installation of a water feature, within the footprint of the existing paved short-term parking lot within the project site, which is already developed and heavily graded. Therefore, the proposed project would not contribute incrementally to cumulative impacts in regard to construction or expansion or recreational facilities, and no mitigation is required.

3.16.5 Mitigation Measures

No mitigation measures would be required.

3.16.6 Level of Significance after Mitigation

There would be no impact to recreation.

[23] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

3.17 Transportation and Traffic

This section of the Environmental Impact Report (EIR) analyzes potential impacts to transportation and traffic from construction, operation, and maintenance of the proposed Forecourt and Esplanade Improvements Project (proposed project). The analysis of transportation and traffic consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions in the project site, anticipated impacts, mitigation measures, and level of significance after mitigation.

The project site falls within both the Central City Community Plan and the Central City North Community Plan areas of the City of Los Angeles. The study area selected for analysis extends to Hill Street and Broadway to the west, Commercial Street and 1st Street to the south, Vignes Street and Mission Road to the east, and Alpine Street and Vignes Street to the north. All of the streets in the study area are under the jurisdiction of the City of Los Angeles. Freeways are under the jurisdiction of the California Department of Transportation (Caltrans).

3.17.1 Regulatory Framework

Federal

Americans with Disabilities (ADA) Act of 1990

Titles I, II, III, and V of the ADA have been codified in Title 42 of the United States Code, beginning at Section 12101. Title III prohibits discrimination on the basis of disability in "places of public accommodation" (businesses and non-profit agencies that serve the public) and "commercial facilities" (other businesses). The regulation includes Appendix A to Part 36 (Standards for Accessible Design), establishing minimum standards for ensuring accessibility when designing and constructing a new facility or altering an existing facility (United States Code, 1990). The project will be designed to meet all ADA design requirements.

State

Complete Streets Act

Assembly Bill (AB) 1358, the Complete Streets Act (Government Code Sections 65040.2 and 65302), was signed into law in September 2008. As of January 1, 2011, the law requires cities and counties, when updating the part of a local general plan that addresses roadways and traffic flows, to ensure that those plans account for the needs of all roadway users. Specifically, the legislation requires cities and counties to ensure that local roads and streets adequately accommodate the needs of bicyclists, pedestrians and transit riders, as well as motorists.

Statewide Transportation Improvement Program (STIP)

Caltrans administers transportation programming for the state. Transportation programming is the public decision-making process that sets priorities and funds projects envisioned in long-range transportation plans. It commits expected revenues over a multi-year period to transportation projects. The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources (Caltrans, 2015).

California Manual on Uniform Traffic Control Devices (California MUTCD)

This California Manual on Uniform Traffic Control Devices (California MUTCD) is published by the State of California, Caltrans, and is issued to adopt uniform standards and specifications for all official traffic control devices in California, in accordance with Section 21400 of the California Vehicle Code (CVC). The California MUTCD incorporates Federal Highway Administration's Manual on Uniform Traffic Control Devices (2009 Edition) and all policies on traffic control devices issued by Caltrans that were issued at the time of its release. Caltrans publishes Standard Specifications, Standard Special Provisions, Standard Plans, and other manuals, which contain specifications and requirements for traffic control devices, including their use and placement, when performing work on State highways. In some cases, those specifications and requirements can vary from and be more stringent than those shown in the California MUTCD. The project will be designed to meet all California MUTCD design requirements.

Senate Bill 743

Senate Bill (SB) 743 was signed into law in September 2013. SB 743 will ultimately eliminate auto delay and level of service as transportation impact metrics in CEQA analyses. The Governor's Office of Planning Research (OPR) has been in a rule-making process, which when complete, will implement the impact analysis changes associated with SB 743. In January 2016, OPR released a revised proposal for changing the CEQA Guidelines that will change the way transportation impacts are analyzed. Impact metrics related to vehicle miles travelled (VMT), are expected to be the required metrics. Individual lead agencies will ultimately be responsible for identifying VMT related impact criteria. The City of Los Angeles has initated a study to develop proposed VMT related impact critieria. While VMT analysis is not yet required, the proposed project is consistent with goals related to reducing VMT as a project that would enhance non-automobile travel modes, and improve access to transit.

Regional

Metro Congestion Management Program (CMP)

Metro, the local CMP agency, has established an approach to implement the statutory requirements of the CMP. The Metro Board adopted the 2010 CMP in October 2010. The approach includes designating a highway network that includes all state highways and principal arterials within the County and monitoring the network's congestion. The CMP identifies a system of highways and roadways, with

minimum levels of service performance measurements designated at Level of Service (LOS) E (unless exceeded in base year conditions) for highway segments and key roadway intersections on this system. For all CMP facilities within the study area a traffic impact analysis is required. The analysis must: investigate measures which will mitigate the significant CMP system impacts; develop cost estimates, including the fair share costs to mitigate impacts of a proposed project; and, indicate the responsible agency. Selection of final mitigation measures is left at the discretion of the local jurisdiction. Once a mitigation program is selected, the jurisdiction self-monitors implementation through the existing mitigation monitoring requirements of CEQA (Metro, 2010).

Metro 2009 Long Range Transportation Plan (LRTP)

The 2009 LRTP includes funding for general categories of improvements, such as Arterial Improvements, Nonmotorized Transportation, Rideshare and Other Incentive Programs, Park-and-Ride Lot Expansion, and Intelligent Transportation System (ITS) improvements for which Call for Project Applications can be submitted for projects in Los Angeles County. Metro also has a Short Range Transportation Plan to define the near-term (through year 2024) transportation priorities in Los Angeles County. In addition to the regional transportation plans, Metro has recently adopted a Complete Streets Policy and a First Last Mile Strategic Plan (Metro, 2014).

Metro Complete Streets Policy

Metro's recently adopted Complete Streets policy is reinforcing the California Complete Streets Act (AB 1358). Effective January 1, 2017, Metro is requiring that all local jurisdictions within Los Angeles County must adopt a Complete Streets Policy, an adopted city council resolution supporting Complete Streets, or an adopted general plan consistent with the California Complete Streets Act of 2008 in order to be eligible for Metro capital grant funding programs, starting with the 2017 grant cycles (Metro, 2014).

SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and Regional Transportation Improvement Program (RTIP)

SCAG adopted the 2016-2040 RTP/SCS in April 2016. The RTP/SCS is a planning document required under state and federal statute that encompasses the SCAG region, including six counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The RTP/SCS forecasts long-term transportation demands and identifies policies, actions, and funding sources to accommodate these demands. The RTP/SCS consists of the construction of new transportation facilities, transportation systems management strategies, transportation demand management and land use strategies (SCAG, 2016). The RTIP, also prepared by SCAG based on the RTP/SCS, lists all of the regional funded/programmed improvements over a 6-year period (SCAG, 2015). The updated 2016 Model was unavailable prior to the completion of this report; therefore, the assumptions and Metro Model outputs are based on the prior RTP/SCS.

Local

City of Los Angeles Mobility Plan 2035

The City updated the Transportation Element of the City's General Plan, now referred to as Mobility Plan 2035 or MP 2035, to reflect policies and programs that will lay the policy foundation for safe, accessible, and enjoyable streets for pedestrians, bicyclists, transit users, and vehicles throughout the City of Los Angeles. The MP 2035 and Final EIR were adopted on August 11, 2015. MP 2035 is compliant with the 2008 Complete Streets Act (Assembly Bill 1358), which mandates that the circulation element of a city's General Plan be modified to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan (City of Los Angeles, 2016). MP 2035 identifies several typologies of "enhanced networks" to guide street design and prioritize one or more modes of travel appropriate to the character of the street and demand for certain travel needs. The typologies include transit, freight, bicycle, and pedestrian, as well as vehicle enhanced (prioritizing critical through-traffic to connect with freeways) and neighborhood enhanced (prioritizing low-speed neighborhood streets with a focus on safety and sharing space between cars and active modes). Several streets in the study area are included in the enhanced networks of MP 2035.

Transit Enhanced Network

- Cesar E. Chavez Avenue
- Main Street
- Broadway
- 1st Street

Neighborhood Enhanced Network

- Ord Street
- Alpine Street

Bicycle Enhanced Network

- Alameda Street
- Los Angeles Street
- Vignes Street
- Broadway
- Spring Street
- Main Street
- Cesar E. Chavez Avenue
- 1st Street

Pedestrian Enhanced Districts

- Portions of all streets within the study area are included in pedestrian enhanced districts.

Vehicle Enhanced Network

- Alameda Street (south of Commercial Street only)

Goods Movement Network

- Alameda Street

Central City/ Central City North Community Plans

Thirty-five Community Plans comprise the City of Los Angeles' state-mandated Land Use Element. These Community Plans are intended to promote an arrangement of land uses, streets, and services that will encourage and contribute to the health, safety, welfare, and convenience of the people who live and work in the Community. The plans aim to keep downtown as the focal point of the regional mobility system while accommodating internal access and mobility within the community. They also aim to improve movement and capacity on freeways adjacent to downtown, enhance pedestrian safety and prioritize pedestrian access, and enhance the streetscape with pedestrian amenities. The last Central City North Community Plan Update was adopted in December 2000, and the last Central City Community Plan Update was adopted in 2003. Concurrent plan updates are currently being prepared.

Alameda District Specific Plan

As a portion of the Central City North Community Plan area, the Alameda District Specific Plan provides for expanded development of the LAUS area as a major regional transit hub, including as a mixed-use development providing office, hotel, retail, entertainment, tourism, residential and related uses. This Specific Plan prevails over the Los Angeles Municipal Code in its regulation of densities, heights, uses, parking, open space, and landscape requirements for the geographic area. The Plan was adopted in 1996. The Plan allows for modifications to identified transportation projects based on analysis by the Los Angeles Department of Transportation (LADOT), and approval by the General Manager of LADOT and the City of Los Angeles Planning Director.

ConnectUS Action Plan

The ConnectUS Action Plan (formerly Union Station and 1st/Central Station Linkages Study) was developed to improve historical and cultural connections in downtown Los Angeles by enhancing pedestrian and bicycle travel options through and between communities. At the center of the study is access to LAUS and the future Regional Connector station at 1st/Central. The ConnectUS Action Plan ("Connect US") includes a neighborhood-level assessment of arterial and collector streets, with an emphasis on bicycle and pedestrian mobility. The study is centered around a community-driven process to identify implementable public improvements which can create connections and pathways between

and through downtown neighborhoods. Connect US provides a community-prioritized list of improvement projects to strengthen bicycle and pedestrian (active transportation) connectivity between communities, destinations, and public transit. The City Planning Commission has adopted a Downtown Design Guide Update that includes reference to the ConnectUS Action Plan.

Union Station Master Plan

The Union Station Master Plan (USMP) area includes Metro's properties located at Union Station, the Mozaic apartments, and the public right of way on the western side of the station. Metro's current holdings include approximately 50 contiguous acres encompassing the historic station, the rail yard, associated transportation hub facilities, the Gateway Building, which serves as Metro's headquarters, and a nearby site currently operated by a restaurant. The master plan improvements build on ongoing restoration and upgrades for the historic station, which have included new signage, restoration of the historic furnishings, woodwork, metalwork, chandeliers, and repainting. Planned improvements to LAUS's perimeter include a series of streetscape, open space, and transit stop improvements that soften the edges of the station, improve the pedestrian and cyclist experience, strengthen connections to and from the station's entrances, and create a more welcoming environment to transit riders and visitors. Long-term plans, subject to the availability of future funding, call for a newly expanded, multi-modal passenger concourse and the relocation of Patsaouras Bus Plaza to the west side of the property. The Metro Board approved moving the USMP from the planning phase into implementation. The proposed project is an element of the USMP.

3.17.2 Affected Environment/Existing Conditions

A comprehensive data collection effort was undertaken to develop a detailed evaluation of existing conditions in the study area. The assessment of conditions relevant to this study includes a description of the study area, an inventory of the local street system in the vicinity of the project site, a review of traffic volumes on these facilities, an assessment of the resulting operating conditions, and the current transit service in the study area. A detailed description of these elements is presented in this section.

Roadway Network

Major arterials serving the study area include Cesar E. Chavez Avenue, Alameda Street, Los Angeles Street, Main Street, and Vignes Street. Regional access to the project site is provided by US-101 directly south of the project site, Interstate 5 approximately two miles to the east of the project site, and State Route 110/I-110 approximately one mile to the west. The characteristics of the major roadways serving the study area are described below. The street descriptions include the designation of these roadways under the Mobility Plan 2035 (Los Angeles Department of Planning, General Plan Mobility Element, May 2015) approved by the City of Los Angeles City Council in August 2015. Streets classified as Boulevards have roadway widths greater than 80 feet, Avenues have widths between 46 and 100 feet, while local and collector streets are 66 feet or narrower. Streets are organized in a hierarchy, with Boulevards

expected to carry the highest number of vehicles, followed by Avenues, and then collector and local streets.

Freeways

The list below describes the regional freeways within the study area:

- **US-101** runs in a northwest-southeast direction near the project site and extends north beyond Los Angeles County. In the vicinity of the study area, US-101 provides four lanes in each direction. Interchanges are provided at Vignes Street, Commercial Street, Alameda Street, and Mission Road.
- **SR-110** lies west of the project site and runs in a north-south direction from Pasadena to San Pedro. In the vicinity of the study area, SR-110 provides four lanes in each direction. Freeway ramps closest to the project site are located at Alpine Street, Figueroa Street, and Hill Street.
- **I-5** runs in a north-south direction across the region and beyond. In the vicinity of the project site, I-5 provides five lanes in each direction and interchanges are located at Cesar E. Chavez Avenue and at Pasadena Avenue.

Arterials

The list below describes key arterials and relevant local streets within the study area:

- **Cesar E. Chavez Avenue** is designated as an Avenue I in the study area. Cesar E. Chavez Avenue has two lanes in each direction and turn pockets at most intersections. Parking is generally permitted on both sides of the street east of Mission Road. Cesar E. Chavez Avenue is part of the Transit Enhanced Network and of the Bicycle Enhanced Network as designated in *Mobility Plan 2035*. In the study area, the street contains a westbound 24-hour bus-only lane from the LAUS Driveway to the western edge of the network, at approximately Hill Street.
- **Commercial Street/Aliso Street** is designated as an Avenue II east of Alameda Street and Avenue I west of Alameda Street. Commercial Street has two through lanes in each direction and provides access to eastbound vehicles on US-101. Parking is only permitted east of the US-101 ramps on Commercial Street. Aliso Street is a 1-way frontage road on the south side of US-101 with access to and from the freeway for eastbound vehicles. Parking is not permitted on Aliso Street.
- **Temple Street** is designated as an Avenue II in the study area. Temple Street has two lanes in each direction and turn pockets at most intersections. Parking is permitted on the south side of the street between Broadway and Spring Street and on the north side of the street between Main Street and Alameda.
- **Vignes Street/Alpine Street** is designated as a Boulevard II between Cesar E. Chavez Avenue and US-101, designated as an Avenue I between Cesar E. Chavez Avenue and Alameda Street, and it is designated as an Avenue III west of Alameda Street. First Street has bike lanes between San Pedro Street and Figueroa Street. Parking is permitted east of Alameda Street. Alpine

Street/Vignes Street is also designated as part of the Bicycle Enhanced Network between US-101 and North Broadway. Vignes Street provides access to and from the US-101 northbound.

- **Alameda Street** is designated as an Avenue I in the study area and is designated as part of the Vehicle Enhanced Network from south of U.S. 101 to the southern edge of the study area. Alameda Street has two or three travel lanes running in each direction and turn pockets at most intersections. Parking is permitted north of Ord Street on both sides of the street. Alameda Street is also designated as part of the Bicycle Enhanced Network within the study area.
- **Broadway** is designated as an Avenue II in the study area. Broadway has two lanes in each direction and turn pockets at most intersections. Parking is permitted on the east side of the street between Aliso Street and Temple Street and on both sides of the street north of Cesar E. Chavez Avenue. Broadway is designated as part of the Transit Enhanced Network within the study area.
- **Los Angeles Street** is designated as an Avenue I in the study area. Los Angeles Street has two lanes in each direction and turn pockets at most intersections. Los Angeles Street is part of the Bicycle Enhanced Network from 2nd Street to Alameda Street and includes Class IV bicycle lanes in each direction between 1st Street and Alameda Street.
- **Main Street** is a designated Avenue II in the study area. It features two lanes in each direction north of Alameda Street with parking on both sides of the street. It is designated as part of the Transit Enhanced Network and of the Bicycle Enhanced Network, and includes northbound class II bicycle lanes south of Cesar E. Chavez Avenue.
- **Mission Road** is a designated as a Boulevard II in the study area. It includes two lanes in each direction with turn pockets at most intersections. Parking is permitted on either side of the street north of US-101. It is designated as part of the Bicycle Enhanced Network and includes Class II bicycle lanes in each direction.
- **Spring Street** is designated as an Avenue I north of 1st Street and south of Cesar E. Chavez Avenue and a Collector Street north of Cesar E. Chavez Avenue. South of Cesar E. Chavez Avenue, Spring Street has three southbound lanes and two northbound bus-only lanes with turn pockets at most intersections. North of Cesar E. Chavez Avenue, Spring Street has one lane in each direction with parking permitted on both sides of the street. Spring Street is part of the Bicycle Enhanced Network and includes southbound Class II bicycle lanes south of Cesar E. Chavez Avenue.

Existing Transit Service

LAUS serves as a local, regional, and intercity hub for a variety of transit mode types and transit operators, including Metro Rail and Metro Bus, Metrolink, Amtrak rail and bus, and intercity, regional, and local bus service operated by other carriers. The following local and regional transit service types operate at LAUS:

Amtrak Intercity Rail

Amtrak is the United States' national rail operator, providing long-distance, intercity rail service throughout the United States. The system uses standard gauge tracks, rolling stock, and diesel locomotives.

Metrolink

Metrolink is the agency that operates Southern California's regional commuter rail system, which serves commuters in six counties, including Los Angeles, Orange, San Bernardino, Riverside, and Ventura Counties; as well as northern San Diego County. Metrolink is governed by the Southern California Regional Rail Authority (SCRRA), a joint powers authority created in 1991, with representation by agencies from five counties, including the Los Angeles County Metropolitan Transportation Authority (Metro), the Orange County Transportation Authority (OCTA), the Riverside County Transportation Commission (RCTC), the San Bernardino Association of Governments (SANBAG), and the Ventura County Transportation Commission (VCTC). The system uses standard gauge tracks and rolling stock, diesel locomotives, and operates on shared conventional rail tracks with Amtrak and freight operators.

Metro Rail

Metro operates the Metro Rail system, the high-capacity rail rapid transit service for Los Angeles County. Metro Rail is operated in dedicated rights-of-way (in contrast to Metrolink and Amtrak, which operate on tracks shared with freight operators), serves dedicated transit stations, and is powered by electricity. Service is provided using two technologies, subway and light rail:

- Subway Metro Rail's heavy rail subway system includes the Red and Purple Lines. The lines operate exclusively below grade and are powered by an electrified third rail. The lines use 75-foot cars, and typically operate 4- to 6-car consists.
- Light Rail Metro Rail Light Rail Transit (LRT) service uses shorter trains than heavy rail—typically operated with two- or three-car consists. LRT vehicles are powered by overhead catenary wires. Unlike heavy rail, Metro Rail LRT service runs on rights-of-way ranging from complete grade separation (above or below grade) to at-grade.

Intercity Bus

Intercity bus lines operate coach-style service, serving destinations in California and the southwest. At LAUS, intercity bus service includes Amtrak, Greyhound, and MegaBus.

Metro Bus Service

Metro Transitway. Metro Transitway service is an expedited Bus Rapid Transit (BRT) service that operates in its own exclusive right-of-way on either arterials or freeways with dedicated transit stations. Enhancements included high capacity vehicles, transit signal priority, and improved fare collection via ticket vending machines (TVM).

Express Bus. Metro Express is used for longer distance trips with fewer stops and service that typically becomes more localized near the end of their routes. Metro Express lines serving Downtown Los Angeles are given route numbers in the 400s. Metro Express service usually operates from a collector area, such as a park-and-ride location, directly to a specific destination or in a particular corridor, with stops on route to major transfer points of activity centers. In addition, it generally operates a major portion of its routing on freeways either in mixed flow traffic, high occupancy vehicle (HOV) lanes, or dedicated bus lanes.

Metro Rapid. Metro Rapid is expedited arterial bus service operating on heavily traveled corridors. Time reductions are achieved with fewer bus stops and transit signal priority. Metro Rapid buses use specially branded buses and enhanced bus stops at select locations, which may include special shelters, information kiosks, and "Next Trip" displays.

Metro Local. Metro provides local bus service throughout Los Angeles County. Local buses numbered 1 to 99 provide service to and from Downtown Los Angeles, with many including service to LAUS. Local bus service may also include limited-stop service, numbered in the 300s, though many of these lines have been transferred to the Metro Rapid system.

Commuter Services

Commuter bus service is a transit service which provides commuters from outside the core metropolitan Los Angeles area an alternative to driving. Though commuter buses are fewer in number than local buses, they have a large role in moving people into the city and through LAUS. Commuter buses only pick up riders at the beginning of their route and deliver riders to job centers with few stops along the way. Commuter services that serve LAUS include routes operated by Santa Clarita Transit (SCT), OCTA, Antelope Valley Transit Authority (AVTA), the Los Angeles Department of Transportation (LADOT), Commuter Express (CE), as well as several lines operated by Foothill Transit (FT).

LAX FlyAway

Los Angeles World Airports (LAWA), owner and operator of Los Angeles International Airport (LAX), operates the FlyAway system. The FlyAway system offers airport patrons the option of a direct, non-stop bus route to the airport as an alternative to driving.

Shuttle Service

A variety of public and private operators serve local destinations and employment centers in the vicinity of LAUS. Private shuttles include those operated by large employers in Downtown Los Angeles, as well as USC and St. Mary's College. LADOT operates DASH service that serves Lincoln Heights/Chinatown and various Downtown destinations. On game days, Metro operates the Dodger Stadium Express shuttle.

Table 3.17-1 shows the various local, rapid, and express bus routes providing service in the study area.

TABLE 3.17-1
LAUS AREA TRANSIT SERVICES

Line	Operation	Service Type	Route	Peak Frequency
Amtrak Thruway	Amtrak	Regional	Fresno via Bakersfield	60 min.
MegaBus	MegaBus	Regional	Multiple	60 min.
AV785	Antelope Valley Transit	Local	Lancaster/Palmdale-Downtown LA	20 min.
BBBR10	Big Blue Bus	Express	Downtown LA-Santa Monica Via Venice	20 min.
CE 409	LADOT	Express	Sylmar-Downtown LA	20 min.
CE 419	LADOT	Express	Chatsworth/Northridge-Downtown LA	20 min.
CE 422	LADOT	Express	Downtown LA-San Fernando Valley/Thousand Oaks	20 min.
CE 423	LADOT	Express	Thousand Oaks/Encino-Downtown LA/USC	15 min.
CE431	LADOT	Express	Downtown LA-Westwood/Rancho Park/Palms	30 min.
CE 437	LADOT	Express	Venice/Marina del Rey-Downtown LA	30 min.
CE 438	LADOT	Express	Redondo Beach/Hermosa Beach-Downtown LA	12 min.
CE 448	LADOT	Express	Rancho Palos Verdes-Downtown LA	30 min.
LAX FlyAway	LAWA	Express	Downtown LA-El Monte via Garvey Ave	30 min.
FT481	Foothill Transit	Express	El Monte - Downtown Los Angeles	15 min.
FT493	Foothill Transit	Express	Diamond Bar - Rowland Heights - Downtown Los Angeles	15 min.
FT495	Foothill Transit	Express	Downtown LA-Walnut	20 min.
FT497	Foothill Transit	Express	Chino Park & Ride - Industry Park & Ride - Downtown Los Angeles	15 min.
FT498	Foothill Transit	Express	Azusa - West Covina - Express Service to Downtown Los Angeles	10 min.
FT499	Foothill Transit	Express	San Dimas Park & Ride - Via Verde Park & Ride - Los Angeles Express Service	15 min.
FT699	Foothill Transit	Express	Montclair - Fairplex Park & Ride - Cal State LA - USC Medical Ctr - Downtown Los Angeles Express Service	10 min.
Silver Streak	Foothill Transit	Express	Downtown LA - Montclair	10 min.
Commuter Express 534	LADOT	Express	Downtown LA - Westwood/West Los Angeles/Century City	20 min.
DASH A	LADOT	DASH - Local	Little Tokyo-City West	7 min.
DASH B	LADOT	DASH - Local	Chinatown-Financial District	8 min.
DASH D	LADOT	DASH - Local	Downtown LA - Harbor Freeway Station	5-15 min.
DASH Lincoln Heights/ Chinatown	LADOT	DASH - Local	Downtown LA - El Monte Station via Garvey Ave & Cesar E Chavez Ave	30 min.
2/302	Metro	Local	Pacific Palisades-Downtown LA	20 min.
4	Metro	Local	Downtown LA - Santa Monica	10 min.
28	Metro	Local	Century City - Eagle Rock via Downtown LA	15 min.
30/330	Metro	Local	Beverly Hills - East Los Angeles via Downtown LA	8 min.
40	Metro	Local	Downtown LA - South Bay Galleria	12 min.

TABLE 3.17-1
LAUS AREA TRANSIT SERVICES

Line	Operation	Service Type	Route	Peak Frequency
45	Metro	Local	Lincoln Heights - Rosewood via Downtown LA	10 min.
68	Metro	Local	Downtown LA - Montebello via Cesar Chavez	15 min.
70	Metro	Local	Downtown LA - El Monte	15 min.
71	Metro	Local	Downtown LA - Cal State LA	30 min.
76	Metro	Local	Downtown LA - El Monte	15 min.
79	Metro	Local	Downtown LA - Arcadia	8 min.
442	Metro	Express	LAUS - Hawthorne/Lennox Station LAUS	45 min.
487	Metro	Local/Express	Downtown LA - Sierra Madre Station	10 min.
489	Metro	Local/Express	Downtown LA - Sierra Madre Station	10 min.
704	Metro	Rapid	Downtown LA - Santa Monica	12 min.
728	Metro	Rapid	Downtown LA - Century City via Olympic Blvd	20 min.
733	Metro	Rapid	Downtown LA - Santa Monica via Venice	10 min.
745	Metro	Rapid	Downtown LA - Harbor Freeway Station	12 min.
770	Metro	Rapid	Downtown LA - El Monte Station via Garvey Ave & Cesar E Chavez Ave	12 min.
794	Metro	Rapid	Sylmar - Downtown LA via Burbank	20 min.
78/378	Metro	Local	Downtown LA - Arcadia	8 min.
81	Metro	Local	Eagle Rock - South Los Angeles via Downtown LA	20 min.
83	Metro	Local	Eagle Rock - Downtown LA	20 min.
90/91	Metro	Local	Sylmar - Downtown LA	15 min.
92	Metro	Local	Downtown Burbank - Downtown LA via Glendale	20 min.
94	Metro	Local	Sylmar - Downtown LA	30 min.
96	Metro	Local	Burbank - Downtown LA	30 min.
910/950X	Metro	Busway	El Monte - Harbor Gateway	5-10 min.
Dodger Shuttle	Metro	Special Event	Downtown LA - Dodgers Stadium	10 min. during Dodgers Games
OC701	Orange County Transit	Express	Huntington Beach - Los Angeles	10 min.
SC 799	Santa Clarita Transit	Express	Downtown LA - Santa Clarita	45 min.
SC 794	Santa Clarita Transit	Express	Downtown LA - Santa Clarita	8 min.
T4	Torrance Transit	Express	Downtown LA - Torrance	30min.
Mount St. Mary's University Shuttle	Mount St. Mary's University	Shuttle	Mount St. Mary's via LAUSLAUS	60 min.
USC Shuttle	USC	Shuttle	USC - HSC via LAUSLAUS	30 min.

SOURCE: Fehr & Peers, 2017.

Figure 3.17-1 illustrates the transit routes that access LAUS, and Figure 3.17-2 illustrates daily stop level bus boardings plus alightings for Metro and municipal bus services within the study area that have these data available. The bus stops at the intersection of Cesar E. Chavez Avenue and Vignes Street have the highest ridership adjacent to the station, with approximately 6,000 daily boardings plus alightings.

The City of Los Angeles Mobility Plan 2035 calls for the establishment of the Transit Enhanced Network, a network of roadway improvements to provide a frequent and reliable bus system, which interfaces and supports the fixed-transit lines. As stated, several streets within the study area are part of this network. Additionally, several streets within the network have portions of the street dedicated exclusively to transit vehicles during all or part of the day, including Spring Street, Cesar E. Chavez Avenue, Aliso Street, and Alameda Street.

Existing Transit Travel Times

Using the simulation model developed for the project and calibrated to observed conditions, existing transit travel times were documented in both directions along two corridors:

1. Alameda Street from north of the U.S. 101/Express Lanes on-ramp to Cesar E. Chavez Avenue
2. Spring Street and Cesar E. Chavez Avenue from Spring Street & Arcadia Street to Cesar E. Chavez Avenue & Alameda Street

These corridors were chosen because they feature most of the transit routes that are expected to be affected by the changes from the project. Alameda Street is the location of project, and thus is expected to see the largest change in operations, while Spring Street is the primary other north/south transit corridor in the network, and runs parallel to Alameda Street. Results and the routes that operate on each corridor are shown in Table 3.17-2. Transit travel times range from 1 minute to 3 minutes 15 seconds depending on the corridor under existing conditions as quantified using the existing conditions simulation model.

TABLE 3.17-2
EXISTING TRANSIT TRAVEL TIME

Corridor	Routes Included	Existing Average Travel Time (min:sec)	
		AM Peak Hour	PM Peak Hour
Alameda Street NB	MTA 40, CE 431, Foothill 699, OCTA 701, AVTA 785, CE 534	1:00	1:15
Alameda Street SB	MTA 40, OCTA 701	1:30	1:15
Spring Street/Cesar E. Chavez Avenue NB	MTA 68, MTA 70/71, MTA 728, MTA 733, MTA 745, MTA 78/79, MTA 378, MTA 770	1:45	1:45
Spring Street/Cesar E. Chavez Avenue SB	MTA 70/71, MTA 78/79, MTA 378, MTA 728, MTA 770	3:15	2:45

SOURCE: Fehr & Peers, 2017

Existing Bicycle Facilities & Conditions

Bikeway planning and design in California typically relies on guidelines and design standards established by California Department of Transportation (Caltrans) in the *Highway Design Manual* (Chapter 1000: Bikeway Planning and Design). The following are the typical bikeway classifications. Figure 3.17-3 illustrates typical street cross sections for these facility types.

- Class I Bikeway (Bike Path) provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized. In general, bike paths serve corridors not served by streets and highways or where sufficient right-of-way exists to allow such facilities to be constructed away from the influence of parallel streets and vehicle conflicts.
- Class II Bikeways (Bike Lanes) are lanes for bicyclists generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are generally five (5) feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted.
- Class III Bikeway (Bike Route) are designated by signs or pavement markings for shared use with pedestrians or motor vehicles, but have no separated bike right-of-way or lane striping. Bike routes serve either to: a) provide continuity to other bicycle facilities, or b) designate preferred routes through high demand corridors.
- Class IV Bikeways (Cycletracks or Protected Bike Lanes) provide a right-of-way designated exclusively for bicycle travel within a roadway and which are protected from other vehicle traffic with devices, including, but not limited to, grade separation, flexible posts, inflexible physical barriers, or parked cars

The following streets have Class II bike lanes in the study area:

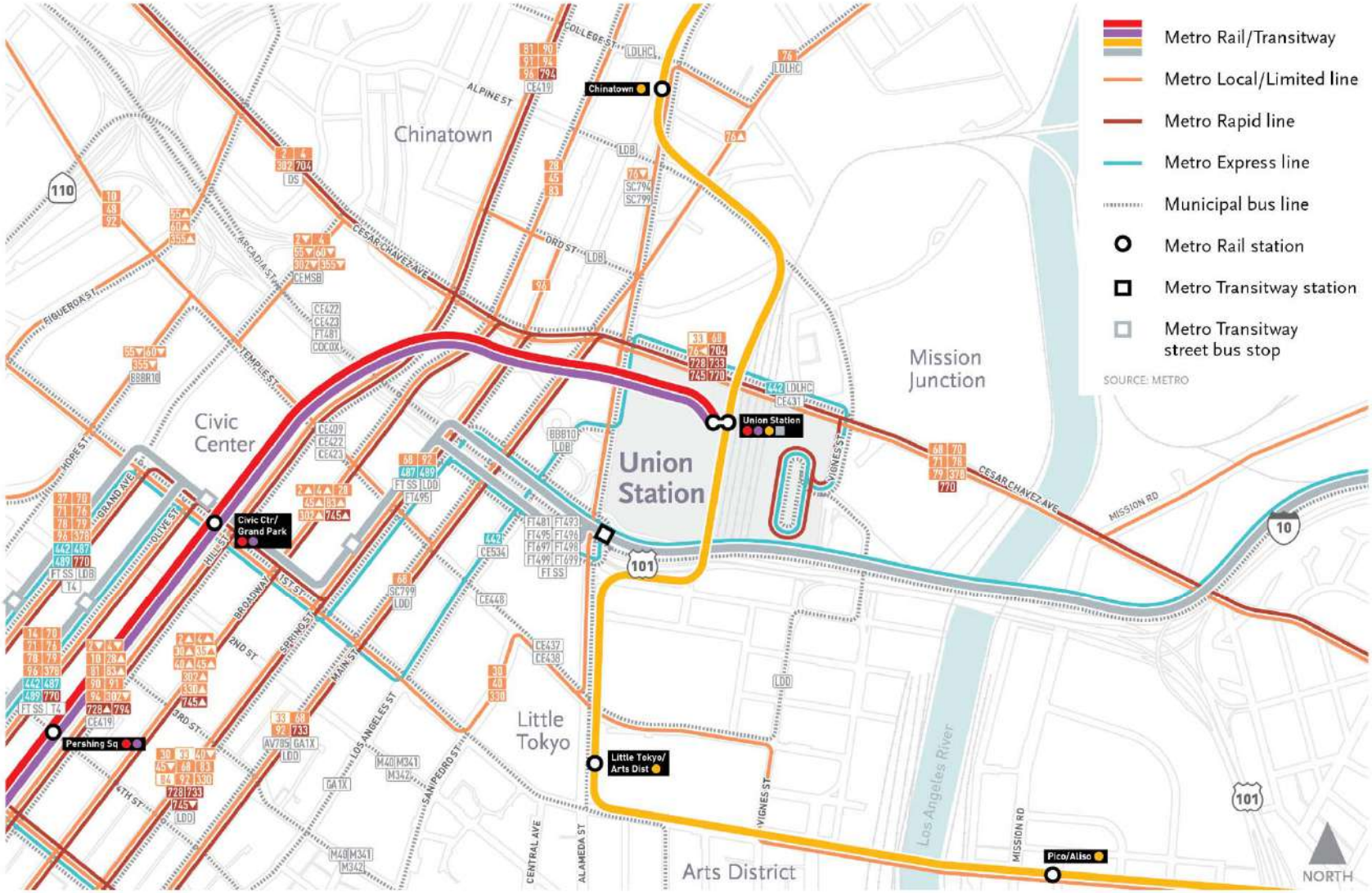
- 1st Street from San Pedro Street to the western edge of the study area
- Spring Street from Cesar E. Chavez Avenue to the southern edge of the study area
- Main Street from Cesar E. Chavez Avenue to the southern edge of the study area
- Mission Road from Cesar E. Chavez Avenue to the northern edge of the study area

The following street has a designated bicycle route (Class III bikeways), with or without sharrows:

- 1st Street from San Pedro Street to the eastern edge of the study area

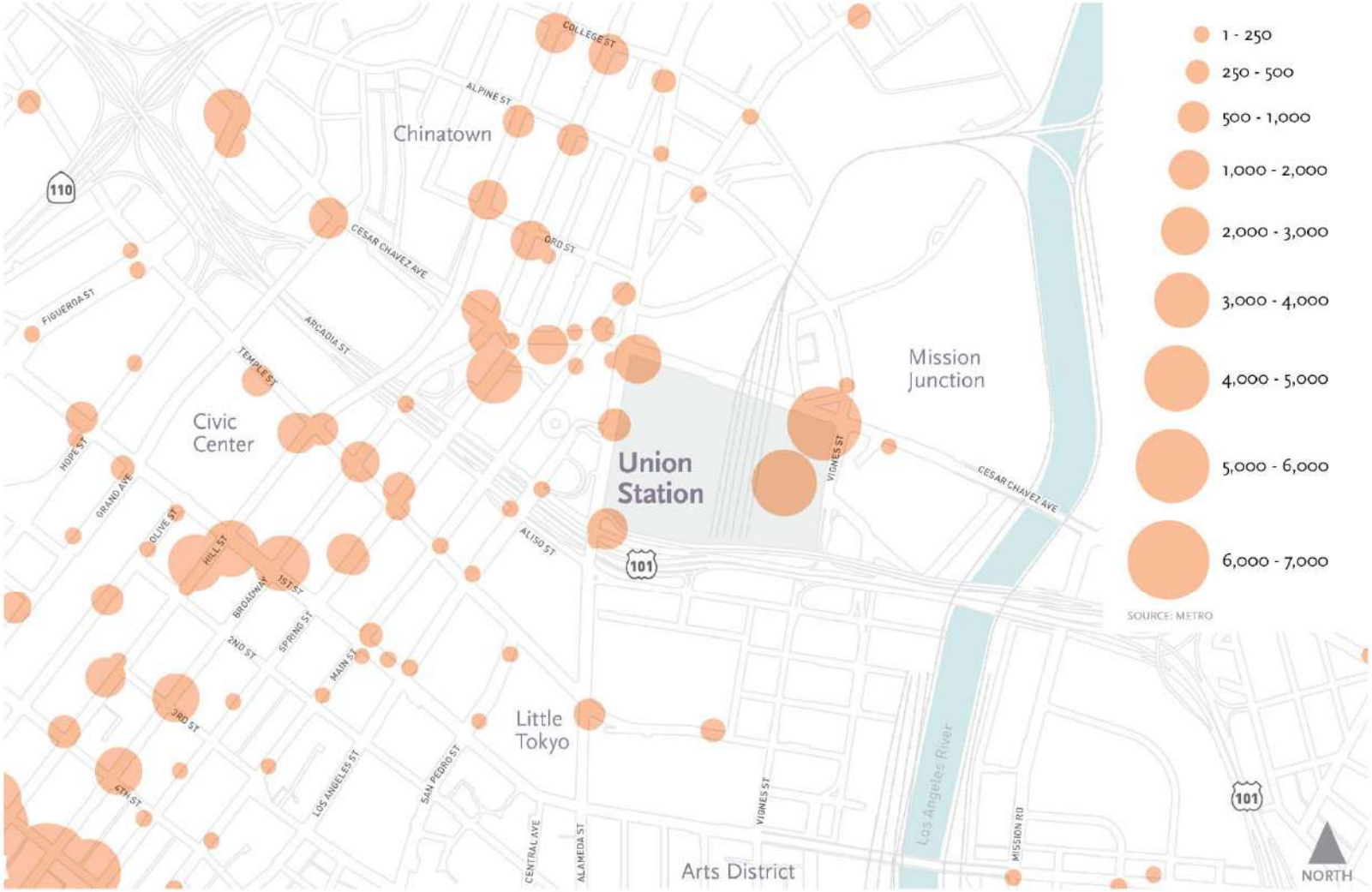
A shared bus and bicycle lane exists on Cesar E. Chavez Avenue in the westbound direction only between LAUS Driveway and the western edge of the network.

A Class IV cycle track exists on Los Angeles Street from Alameda Street to 1st Street.



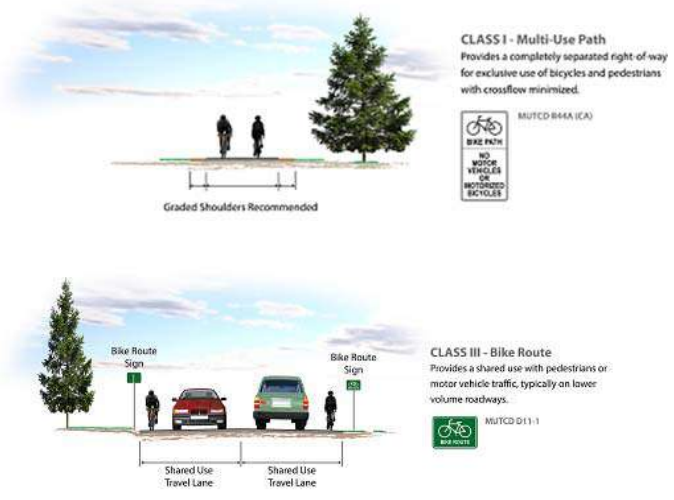
Source: Fehr & Peers, 2017

Figure 3.17-1. Study Area Transit Routes



Source: Fehr & Peers, 2017

Figure 3.17-2. Stop Level Bus Boardings + Alightings



Source: Fehr & Peers, 2017

Figure 3.17-3. Typical Bicycle Facility Cross Sections

Figure 3.17-4 displays the existing and planned bikeways in the study area, and Figure 3.17-5 maps collisions involving bicycles by intersection between 2011 and 2015, using the most recent data available from the Statewide Integrated Traffic Records System (SWITRS) managed by the California Highway Patrol (CHP).

Although recent expansions to the bikeway network have improved connections near LAUS, key north-south and east-west gaps remain on Cesar E. Chavez Avenue and Alameda Street north of the site. Collision totals near LAUS are most prominent on Cesar E. Chavez Avenue, Los Angeles Street, and Broadway. Many of the streets within the study area are part of the Bicycle-Enhanced Network within the City of Los Angeles Mobility Plan 2035, which are planned for treatments that prioritize bicyclists.

Existing Pedestrian Facilities & Conditions

Downtown Los Angeles has a mature network of pedestrian facilities including sidewalks, crosswalks, and pedestrian safety features. Immediately west of LAUS, across Alameda Street, Olvera Street and the Los Angeles Plaza Park provide pedestrians with a space to rest. Approximately 8- to 12-foot sidewalks are generally provided throughout the area, less than the 15-foot sidewalk width designated for most streets in the areas as part of the City of Los Angeles *Complete Streets Design Guide*. However, the large scale rail infrastructure and depressed interstate create physical barriers for pedestrians along the south and east side of the project. Despite the physical proximity of many destinations in the study area, community members stated that the environment makes walking feel unsafe, uncomfortable and destinations feel distant. Outreach completed during the ConnectUS Action Plan determined that many pedestrian facilities near LAUS, such as Alameda Street and Cesar E. Chavez Avenue, were perceived to be uncomfortable places to walk; while facilities along and across Broadway, North Spring Street, North Main Street, and 1st Street were more comfortable.

Figure 3.17-6 shows collisions involving pedestrians by intersection between 2011 and 2015. Within the study area, collisions are highest along Alameda Street in front of Union Station, in Chinatown, and along 1st Street. Many of the streets within the study area are characterized as Pedestrian-Enhanced Districts, where pedestrian improvements are prioritized relative to other modes in the City of Los Angeles Mobility Plan 2035. The City of Los Angeles Mobility Plan 2035 sets the foundation for more balanced streets and designates Pedestrian Enhanced Districts where pedestrian improvements are prioritized.

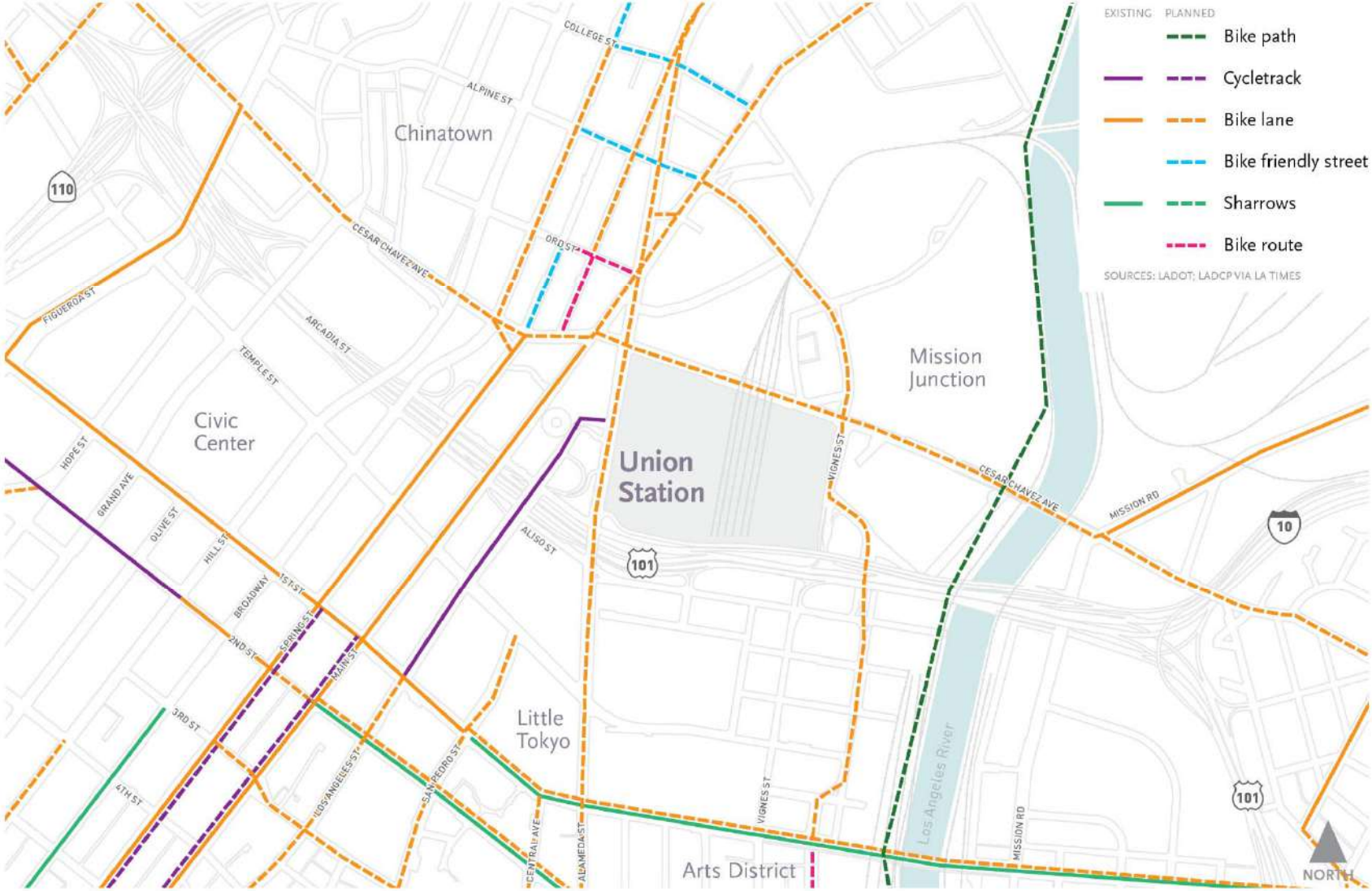
As directed by Mayor Garcetti, the City of Los Angeles has made a commitment to eliminate all traffic deaths by 2025 through its Vision Zero initiative. As part of the Vision Zero process, the Los Angeles Department of Transportation (LADOT) has identified a network of streets, designated as the High Injury Network (HIN), where safety investments will be prioritized. Alameda Street in front of Union Station, is on the HIN.

3.17.3 Existing Traffic Volumes and Level of Service

This section presents existing (base year 2015) peak hour traffic volumes, describes the methodology used to assess the traffic conditions at each intersection, and analyzes the resulting operating conditions at each; indicating average served volume (vehicles per hour), average delay (seconds per vehicle), and levels of service (LOS).

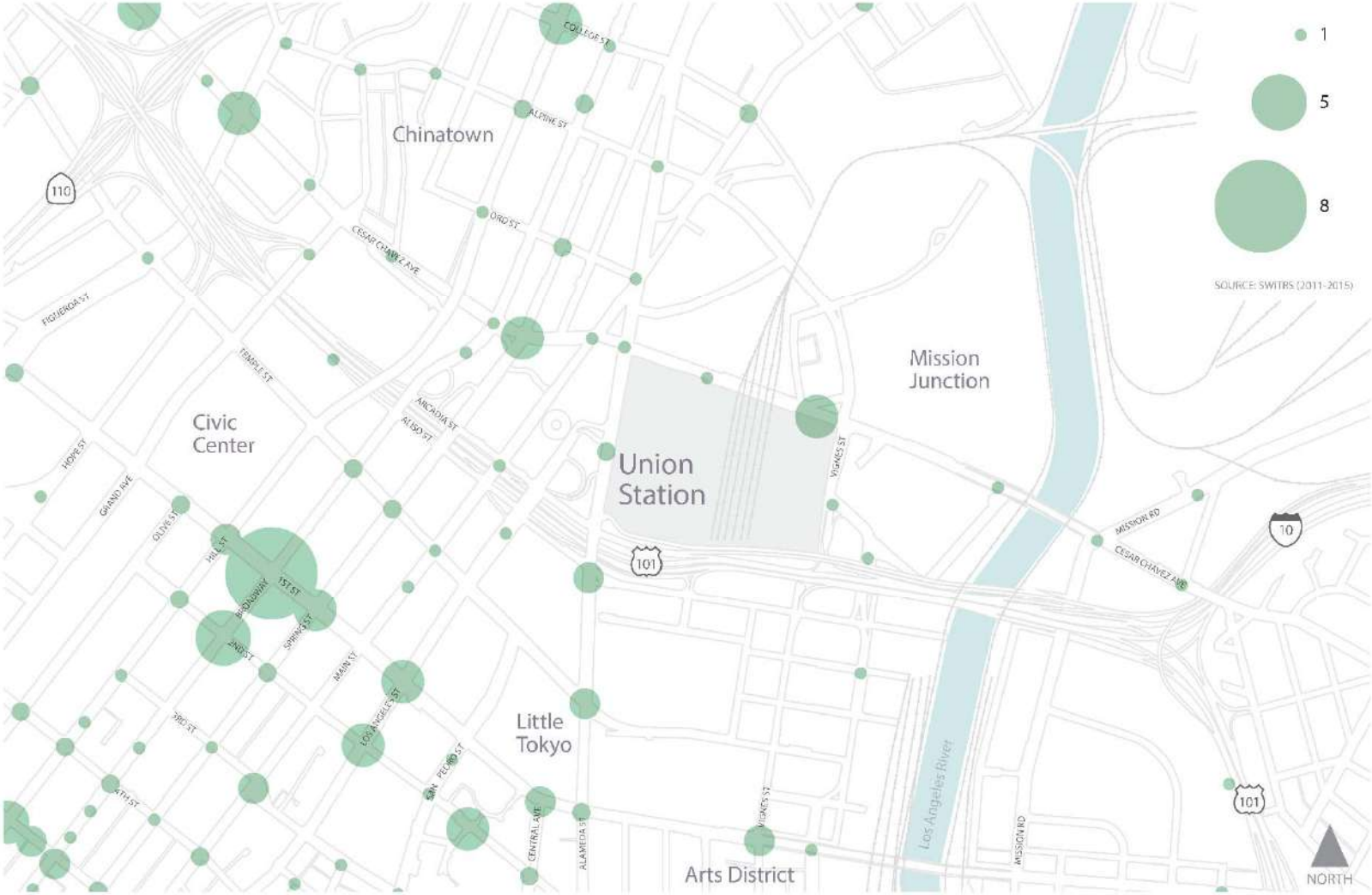
Traffic Analysis Study Area

Forty-one intersections were selected for analysis in consultation with agency staff for potential impacts using the methodology required by LADOT. The study intersections are shown in Figure 3.17-7.



Source: Fehr & Peers, 2017

Figure 3.17-4. Existing & Planned Bicycle Facilities

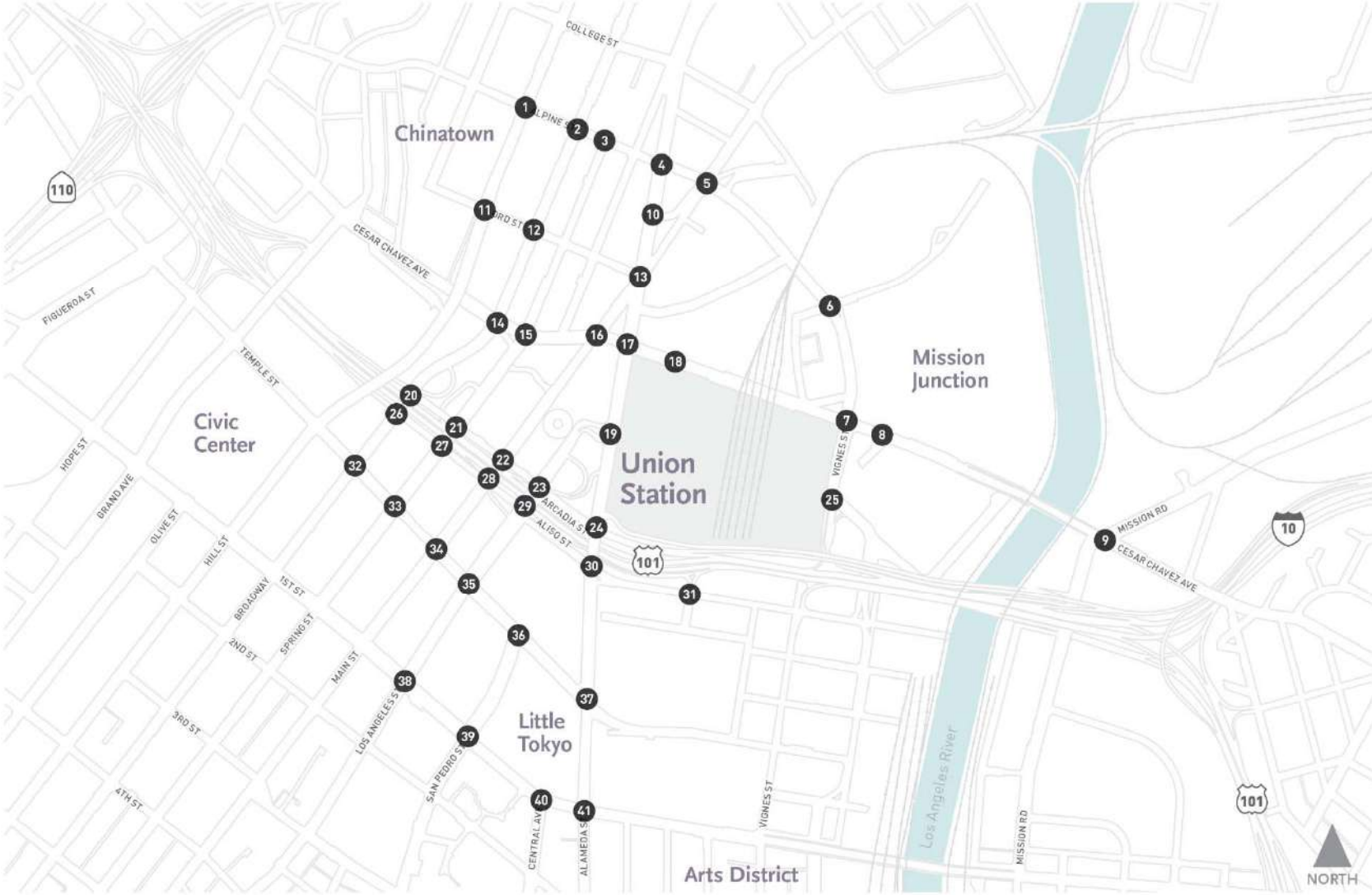


Source: Fehr & Peers, 2017

Figure 3.17-5. Bicycle Collisions

Source: Fehr & Peers, 2017

Figure 3.17-6. Pedestrian Collisions



Source: Fehr & Peers, 2017

Figure 3.17-7. Study Intersections

1. Hill Street & Alpine Street
2. Broadway & Alpine Street
3. North Spring & Alpine Street
4. Alameda Street & Alpine Street
5. Main Street & Alpine Street/Vignes Street
6. Bauchet Street & Vignes Street
7. Cesar Chavez Avenue & Vignes Street
8. Lyon Street & Vignes Street
9. Mission Road & Vignes Street
10. Alameda Street & Alhambra Avenue
11. Hill Street & Ord Street
12. Broadway & Ord Street
13. Alameda Street & Main Street/Bauchet Street
14. Broadway & Cesar Chavez Avenue
15. Spring Street/New High Street & Cesar Chavez Avenue
16. Main Street & Cesar Chavez Avenue
17. Alameda Street & Cesar Chavez Avenue
18. LAUS Driveway & Cesar Chavez Avenue
19. Alameda Street & Los Angeles Street
20. Broadway & Arcadia Street
21. Spring Street & Arcadia Street
22. Main Street & Arcadia Street
23. Los Angeles Street & Arcadia Street
24. Alameda Street & Arcadia Street
25. Vignes Street & Ramirez Street/Patsaouras Transit Plaza
26. Broadway & Aliso Street
27. Spring Street & Aliso Street
28. Main Street & Aliso Street
29. Los Angeles Street & Aliso Street
30. Alameda Street & Aliso Street
31. Geary Street/US 101 Ramps & Commercial Street
32. Broadway & Temple Street
33. Spring Street & Temple Street
34. Main Street & Temple Street
35. Los Angeles Street & Temple Street
36. Judge John Aiso Street & Temple Street
37. Alameda Street & Temple Street
38. Los Angeles Street & 1st Street
39. Judge John Aiso Street /San Pedro Street & 1st Street
40. Central Avenue & 1st Street
41. Alameda Street & 1st Street

Per typical LADOT procedures, signalized study intersections are analyzed. However, the simulation model, as detailed below, includes unsignalized intersections and freeway on-ramps, so traffic congestion on those facilities are accounted for in the simulation results.

Development of Multi-Modal Simulation Model Network

In order to effectively evaluate people's travel behavior and multi-modal network operations adjacent to and around the proposed LAUS Forecourt and Esplanade, a multi-modal micro-simulation model was developed. This was determined to be the appropriate tool to analyzing the traffic effects of the project through ongoing coordination with LADOT throughout the preparation of the Union Station Master Plan and ConnectUS Action Plans. This approach is consistent with Federal and State guidance for operations analysis in congested locations with closely spaced intersections and significant transit and pedestrian activity.

The outputs of the model include the following:

- Local corridor travel time estimates
- Intersection vehicle delay and queue lengths

Unlike most static traffic operations analysis routines, a microsimulation model analysis includes the effects that closely-spaced intersections can have on study intersections such as queuing from adjacent upstream intersections into the study intersection or vehicle platooning from traffic signal coordination at upstream intersections. Microsimulation models also include the effects of other travel modes on network performance including transit vehicles, bicyclists, and pedestrians. The video animation provided by a microsimulation model also helps by visually presenting the corridor queuing and congestion issues, which are used to verify the adequacy of the proposed design concepts in terms of geometrics dimensions and roadway capacity.

The microsimulation model was developed using PTV VISSIM 8.0 software. The VISSIM model was validated to AM and PM peak hour 2015 existing conditions using the criteria contained in Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software (Federal Highway Administration, 2004). The validation criteria emphasize matching existing demand throughout the model and replicating observed queuing and congestion. The VISSIM simulation model was developed as follows:

- The model was constructed from using observed data for:
    - Roadway network (lane configuration)
    - Travel volumes (intersection counts)
    - Traffic controls (traffic signal and ramp meter)

- Driver behavior parameters were adjusted based on field observations, including:
    - Car Following – Safety Distance
    - Lane Change – Safety Distance Reduction Factor
    - Lane Change – Look Ahead and Emergency Stop Distances
    - Permissive Left-Turn Aggressiveness

- The existing intersection and roadway geometry were obtained from aerial photographs and confirmed during site visits conducted in fall 2015 and subsequent site visits in late 2016 to update the simulation model to reflect the state of the street network at the time of the issuance of the project's Notice of Preparation (NOP) in December 2016. The changes between fall 2015 and the beginning of 2017 include the following:
    - The installation of protected bicycle lanes on Los Angeles Street between Alameda Street and 1st Street
    - The installation of westbound bus-only lane on Cesar Chavez Avenue between the LAUS Driveway and the western edge of the network, located west of Broadway

Multi-Modal Simulation Model Data Collection

The AM and PM peak hour intersection traffic counts were collected over several days in November 2015 (between 7:00–10:00 AM and 4:00–7:00 PM). Traffic volumes used for the analysis of existing conditions represent a network-wide peak hour (7:30–8:30 AM and 5:00–6:00 PM), and volumes were balanced between intersections and driveways within the network. Vehicle volumes were balanced to ensure the model is accurately assigning the correct number of vehicles for each turning movement at intersections within the network. It also ensures continuity between intersections for counts that were taken on different days, and provides logical volume estimates for intersections where counts are not available.

Volumes from adjacent intersections were balanced to develop existing volumes at minor (generally unsignalized) non-study intersections and driveways where counts were not available. At these intersections, vehicles were added or removed to ensure volume consistency between study intersections.

Traffic signal control data (i.e. signal phasing/timings) were provided by the City of Los Angeles. The signal timings were confirmed during field observations and adjusted as necessary to match observed cycle lengths and phase lengths. The ramp meter rates at the eastbound US-101 on-ramps from Los Angeles Street was also observed and incorporated into the model. The posted speed limits for the network were collected during field observations. Traffic controls at unsignalized intersections were taken from aerial photographs and confirmed during field observations.

Transit routes, service headways, and stop locations within the study area were collected from the transit operators and confirmed during site visits. All of the transit routes detailed in Table 3.17-1 above are included in the model analysis. Based on the geometry of transit stop locations, the buses either stop in the lane or pull over to allow vehicles to pass. This was further calibrated during model development to reflect field observations related to bus overtaking by passenger vehicles and bus positioning at stop locations.

Multi-Modal Simulation Model Calibration and Validation

The default VISSIM parameters for geometrics and driver behavior were iteratively adjusted at congested intersections until the model was validated to observed conditions. Link speeds were adjusted to better match with vehicle volume throughput; conflict areas and priority rules were altered to better match queueing conditions and to ensure vehicle turning behavior matched observed conditions in the field.

Federal Highway Administration (FHWA) guidelines[1] recommend running the simulation multiple times for each alternative. As microsimulation models, like VISSIM, rely on the random arrival of vehicles, multiple runs are needed to provide a reasonable level of statistical accuracy and validity. Therefore, each peak hour simulation scenario was run 20 times using different seed numbers and ten outlier runs were discarded. The resulting 10 runs (each using a different random seed number) were averaged to determine the final results. Each run included a 15-minute seeding period and 60-minute analysis period. The input demand is constant throughout the simulation.

The recommended validation criteria from the FHWA Traffic Analysis Toolbox are as follows:

- Link volumes[2] for more than 85% of cases meet the following criteria:
    - For volumes less than 700 vehicles per hour (vph), within 100 vph
    - For volumes between 700 and 2,700 vph, within 15%
    - For volumes greater than 2,700, within 400 vph
- Link volumes for more than 85% of cases have a GEH statistic less than 5
- Sum of link volumes within 5%
- Sum of link volumes have a GEH statistic[3] less than 4
- Queuing and congestion in the network is visually acceptable

[1] Federal Highway Administration (FHWA). "Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software". June 2004.

[2] Link volumes calculated using intersection approach volumes at study intersections.

[3] The GEH Statistic is a formula used in traffic modeling to estimate goodness of fit by comparing existing traffic counts against the modeled traffic volumes. A larger GEH is caused by a larger discrepancy between the two volume sets. The GEH statistic is calculated using the following formula:

GEH = √ (2 (model - count)2 / (model + count))

The following additional validation criterion, which has a narrower tolerance for intersections than suggested by FHWA, was also used for model validation:

- Total peak hour intersection volumes within 5%

Table 3.17-3 shows how the results for the existing conditions VISSIM models compared to the validation criteria thresholds recommended in the FHWA guidelines. The volumes for all links meet the criteria threshold for the AM peak period, and for 98 percent of links in the PM period. Aggregations of link volumes for the total network and for the study intersections meet the 5 percent tolerance. The overall GEH Statistic thresholds were met for both peak hours. The total modeled volume is within 2 percent of the total demand volume for both peak hours. Both peak hour models meet the link volume GEH statistic and visual inspection of queuing. Therefore, the simulation model meets the required criteria for validity.

TABLE 3.17-3
AM & PM PEAK HOUR SIMULATION MODEL VALIDATION

Criteria	Threshold	% Meet	AM % Meet	AM Pass/Fail	PM % Meet	PM Pass/Fail
Link Volumes						
< 700 vph	100 vph	> 85%	100%	Pass	95%	Pass
700 – 2,700 vph	15%	> 85%	100%	Pass	100%	Pass
> 2,700 vph	400 vph	> 85%	N/A	Pass	N/A%	Pass
GEH Statistic	5	> 85%	97%	Pass	99%	Pass
Sum of Link Volumes						
Sum of All Links	5%	-	Within 0.5%	Pass	Within 0.2%	Pass
GEH Statistic	4	-	1.6	Pass	0.7	Pass
Aggregated Volumes						
Intersections	5%	> 85%	98%	Pass	100%	Pass
Visual Inspection						
Queuing	Visually acceptable		Yes	Pass	Yes	Pass

SOURCE: Fehr & Peers, 2017.

The following queues were observed at key intersections during field observations and in the AM peak hour model:

- Queues up to 1,300 feet in the westbound direction at Cesar Chavez Avenue & Vignes Street. These queues extended through the intersection of Lyon Street & Cesar Chavez Avenue.
- The vehicle demand exceeds the storage in the southbound right-turn pocket at Mission Road & Cesar Chavez Avenue. Westbound queueing at this intersection exceeded 1,200 feet.
- Southbound queues on Alameda Street & Cesar Chavez Avenue extended upstream to the intersection Alhambra Avenue & Alameda Street.
- Queues up to 450 feet in the southbound direction at Broadway & Cesar Chavez Avenue.

- Westbound queueing on Cesar Chavez Avenue extended from Broadway & Cesar Chavez Avenue through the upstream intersections to the LAUS train overpass, a distance of approximately 700 feet beyond Alameda Street.
- Southbound queues at Los Angeles Street & Alameda Streets extended back 350 feet.
- Queuing on Arcadia Street often spills back to the upstream intersection.
- Queueing on the U.S. 101/El Monte Busway off-ramps at Alameda Street extended beyond the gore point where ramps from U.S. 101 and the El Monte Busway converge.
- Northbound queueing on Alameda Street & Aliso Street/Commercial Street extended to the intersection of Alameda Street & Temple Street.

The following queues were observed at key intersections during field observations and in the PM peak hour model:

- Northbound queues on Alameda Street & Alpine Street extended upstream through the intersection Alhambra Avenue & Alameda Street.
- Eastbound queues at Cesar E. Chavez Avenue & Vignes Street extended to the LAUS train overpass, a distance of approximately 500 feet. Northbound queues at this intersection extended close to the upstream intersection with Ramirez Street & Vignes Street.
- Eastbound queues at Cesar E. Chavez Avenue & Mission Road extended across the bridge over the Los Angeles River, a distance of 500 feet.
- Eastbound queues at Alameda Street & Main Street, vehicles that are traveling northbound on Main Street, extended upstream to the intersection of Cesar Chavez Avenue & Main Street. Northbound queueing at Cesar E. Chavez Avenue & Main Street extended another 500 feet upstream.
- Northbound queueing at Broadway & Cesar E. Chavez Avenue extended beyond the U.S. 101 on-ramps, a distance of 400 feet.
- Eastbound queueing on Cesar E. Chavez Avenue extended from Alameda Street through the upstream intersections beyond the Hill Street overpass.
- The vehicle demand exceeds the storage in the southbound left-turn pocket at Alameda Street & El Monte Busway.
- Northbound queues at Alameda Street & Arcadia Street/El Monte Busway extended upstream to the intersection of Alameda Street & Aliso Street.
- Eastbound queuing on Aliso Street extended from the intersection for Alameda Street & Aliso Street/Commercial Street upstream through the intersection with Aliso Street & Main Street.
- Northbound queueing on Alameda Street & Aliso Street/Commercial Street extended to the intersection of Alameda Street & Temple Street.
- Queuing for right-turning vehicles on Commercial Street extended back 500 feet.
- Queueing at Los Angeles Street & Aliso Street extends upstream through the intersection of Los Angeles Street & Temple Street to the intersection of Los Angeles Street & 1st Street.

Congestion and queuing exists at other locations throughout the study area but is intermittent without extensive residual queuing. As a result of these observations and the other validation criteria, both the AM and PM peak hour models are found to be validated.

The traffic simulation model was used to generate performance measures consistent with *Highway Capacity Manual* (HCM) (Transportation Research Board, 2010). The following transportation performance metrics are used to evaluate the potential effects of the project:

- Intersection vehicular operating conditions (average vehicle delay and level-of-service)
- Corridor vehicular travel times between major access gateway intersections, freeway ramps, and parking access points
- Percent demand served

Existing Traffic Conditions

The analysis of existing traffic conditions is intended to provide a basis for the remainder of the study. The existing conditions analysis includes a description of the transportation system serving the project site, existing traffic volumes, and an assessment of the operating conditions at the study analysis locations described below.

This section presents the existing peak hour turning movement traffic volumes for the 41 study intersections, using the HCM methodology to assess the traffic conditions at intersections, and analyzes the resulting operating conditions. New weekday AM and PM peak hour turning movement counts were collected at the study intersections in November 2015 (between 7:00-10:00 AM and 4:00-7:00 PM). The existing weekday morning and afternoon peak hour volumes at the study intersections and count sheets for these intersections are contained in Appendix H, *Traffic Data*, to the Draft EIR.

Level of Service Methodology

Traffic operations for this study are described in terms of level of service (LOS). Intersection LOS is a qualitative measure used to describe perceived traffic operating conditions for motorists based on automobile delay with the application of the HCM 2010 operational method. Each study intersection was evaluated based on the amount of traffic traveling through the intersection, the lane geometries, the signal phasing and other factors affecting operating capacity such as on-street parking, presence of bus operations near the intersection, and pedestrian volumes and interactions at the street crosswalks. These characteristics are used to evaluate the operation of each signalized intersection, which is described generally in terms of LOS.

The HCM 2010 method measures LOS on the average stopped delay experienced per vehicle. Section 3.17-4 provides LOS definitions for signalized intersections using the HCM methodology. LOS categories range from excellent, nearly free-flow traffic at LOS A to overloaded, stop-and-go conditions at LOS F.

TABLE 3.17-4
LEVEL OF SERVICE DEFINITIONS

LOS	Average Intersection Delay	General Description
A	0 – 10.0	Little to no congestion or delays.
B	10.1 – 15.0	Limited congestion. Short delays.
C	15.1 – 25.0	Some congestion with average delays.
D	25.1 – 35.0	Significant congestion and delays.
E	35.1 – 50.0	Severe congestion and delays.
F	> 50.0	Total breakdown with extreme delays.

SOURCE: *Highway Capacity Manual, 2010.*

Existing Levels of Service

This section presents the existing peak hour turning movement traffic volumes for the 41 study intersections and the HCM methodology used to assess the traffic conditions at intersections, and also analyzes the resulting operating conditions. The existing weekday AM and PM peak hour turning movements were used in conjunction with the level of service methodology described above to determine existing operating conditions at each of the study intersections.

Table 3.17-5 summarize the existing weekday AM and PM peak hour LOS. As shown, all but eight of the 41 study intersections currently operate at LOS D or better during both the AM and PM peak hours. The following eight intersections are currently operating at LOS E or F, during one or both of the analyzed peak hours:

8. Cesar E. Chavez Avenue & Lyon Street
9. Cesar E. Chavez Avenue & Mission Road
18. Cesar E. Chavez Avenue & Union Station Driveway
24. Alameda Street & Arcadia Street/U.S. 101 Off-ramp
28. Main Street & Aliso Street
30. Alameda Street & Aliso Street
34. Main Street & Temple Street
38. Los Angeles Street & Temple Street

Poor level of service at East Cesar E. Chavez Avenue & Lyon Street and East Cesar E. Chavez Avenue & Union Station Driveway is caused by delay at the downstream intersections (at Vignes Street and Alameda Street, respectively). Several of the above intersections are at the edge of the network, and therefore do not have intersections upstream to meter traffic flow.

TABLE 3.17-5
EXISTING LEVEL OF SERVICE

#	N/S Street	E/W Street	Jurisdiction	Existing Conditions			
				AM		PM	
				Delay	LOS	Delay	LOS
1	North Hill Street	Alpine Street	City of Los Angeles	19	B	18	B
2	North Broadway	Alpine Street	City of Los Angeles	24	C	20	B
3	North Spring Street	Alpine Street	City of Los Angeles	23	C	16	B
4	Alameda Street	Alpine Street	City of Los Angeles	42	D	16	B
5	North Main Street	Alpine Street/Vignes Street	City of Los Angeles	21	C	33	C
6	Vignes Street	Bauchet Street	City of Los Angeles	9	A	12	B
7	Vignes Street	Cesar E. Chavez Avenue	City of Los Angeles	31	C	40	D
8	Lyon Street	Cesar E. Chavez Avenue	City of Los Angeles	79	E	22	C
9	Mission Road	Cesar E. Chavez Avenue	City of Los Angeles	120+	F	47	D
10	Alameda Street	Alhambra Avenue	City of Los Angeles	9	A	14	B
11	North Hill Street	Ord Street	City of Los Angeles	14	B	13	B
12	North Broadway	Ord Street	City of Los Angeles	19	B	21	C
13	Alameda Street	Main Street/Bauchet Street	City of Los Angeles	14	B	20	C
14	North Broadway	Cesar E. Chavez Avenue	City of Los Angeles	26	C	29	C
15	North Spring Street/New High Street	Cesar E. Chavez Avenue	City of Los Angeles	46	D	29	C
16	North Main Street	Cesar E. Chavez Avenue	City of Los Angeles	17	B	29	C
17	Alameda Street	Cesar E. Chavez Avenue	City of Los Angeles	32	C	29	C
18	Union Station Driveway	Cesar E. Chavez Avenue	City of Los Angeles	93	F	64	E
19	Alameda Street	Los Angeles Street	City of Los Angeles	15	B	31	C
20	North Broadway	Arcadia Street	City of Los Angeles	15	B	11	B
21	North Spring Street	Arcadia Street	City of Los Angeles	24	C	15	B
22	North Main Street	Arcadia Street	City of Los Angeles	18	B	18	B
23	North Los Angeles Street	Arcadia Street	City of Los Angeles	30	C	23	C
24	Alameda Street	Arcadia Street/US 101 Off-Ramps	City of Los Angeles	78	E	22	C
25	Vignes Street	Ramirez Street/Patsaouras Transit Plaza/US 101 Off-Ramps	City of Los Angeles	30	C	33	C
26	North Broadway	Aliso Street/US 101 Off-Ramps	City of Los Angeles	11	B	32	C
27	North Spring Street	Aliso Street	City of Los Angeles	12	B	30	C
28	North Main Street	Aliso Street	City of Los Angeles	13	B	67	E
29	North Los Angeles Street	Aliso Street	City of Los Angeles	19	B	48	D
30	Alameda Street	Aliso Street/Commercial Street	City of Los Angeles	41	D	57	E
31	Garey Street/US 101 Off-Ramps	Commercial Street	City of Los Angeles	24	C	29	C

TABLE 3.17-5
EXISTING LEVEL OF SERVICE

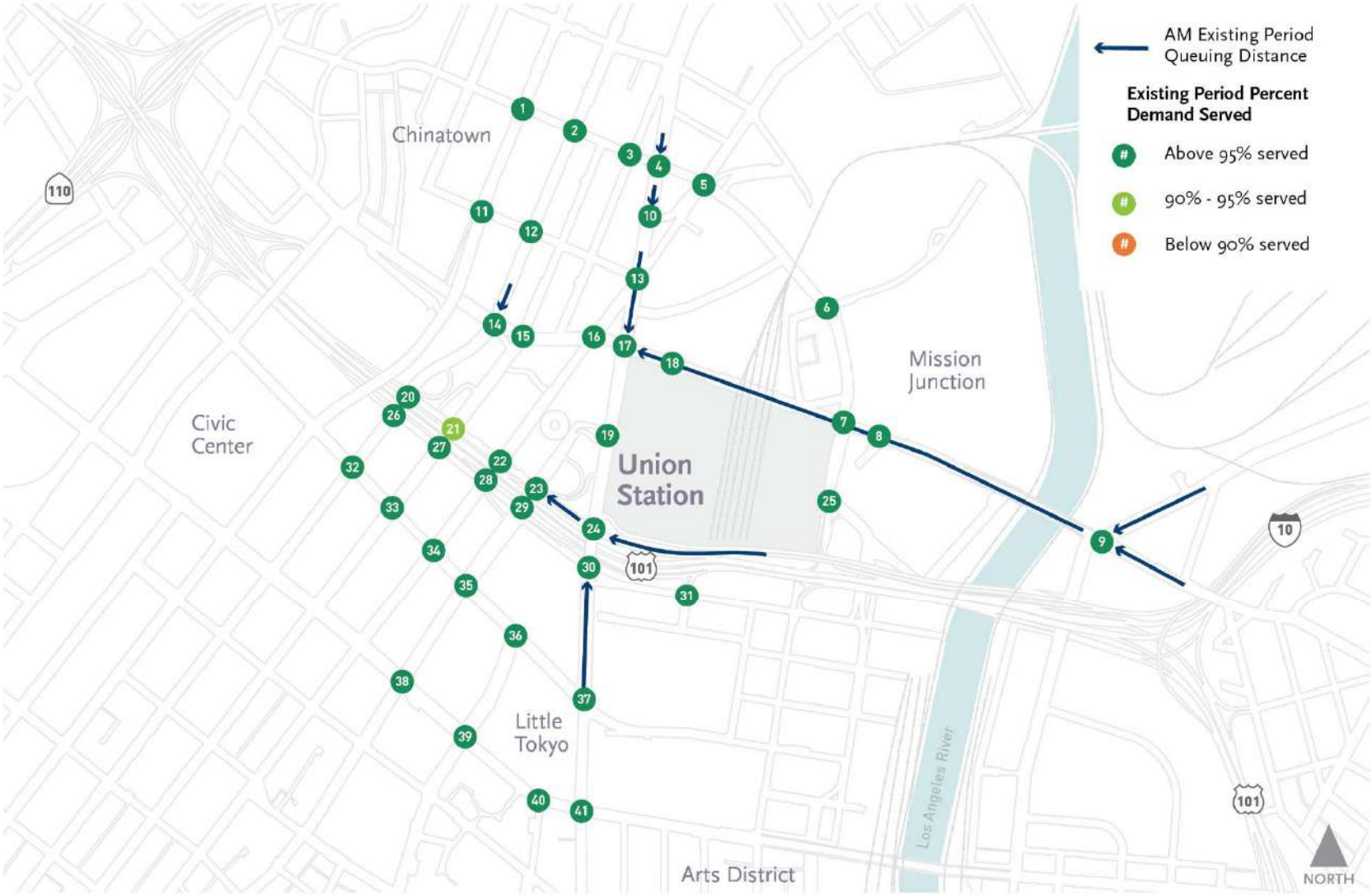
#	N/S Street	E/W Street	Jurisdiction	Existing Conditions			
32	North Broadway	Temple Street	City of Los Angeles	14	B	30	C
33	North Spring Street	Temple Street	City of Los Angeles	18	B	32	C
34	North Main Street	Temple Street	City of Los Angeles	20	C	104	F
35	North Los Angeles Street	Temple Street	City of Los Angeles	30	C	59	E
36	Judge John Aiso Street	Temple Street	City of Los Angeles	12	B	22	C
37	Alameda Street	Temple Street	City of Los Angeles	39	D	41	D
38	Los Angeles Street	1st Street	City of Los Angeles	14	B	46	D
39	San Pedro Street	1st Street	City of Los Angeles	11	B	10	B
40	Central Ave	1st Street	City of Los Angeles	12	B	16	B
41	Alameda Street	1st Street	City of Los Angeles	19	B	20	B

NOTE: LOS results based on HCM methodology.
SOURCE: Fehr & Peers, 2017.

Percent Demand Served

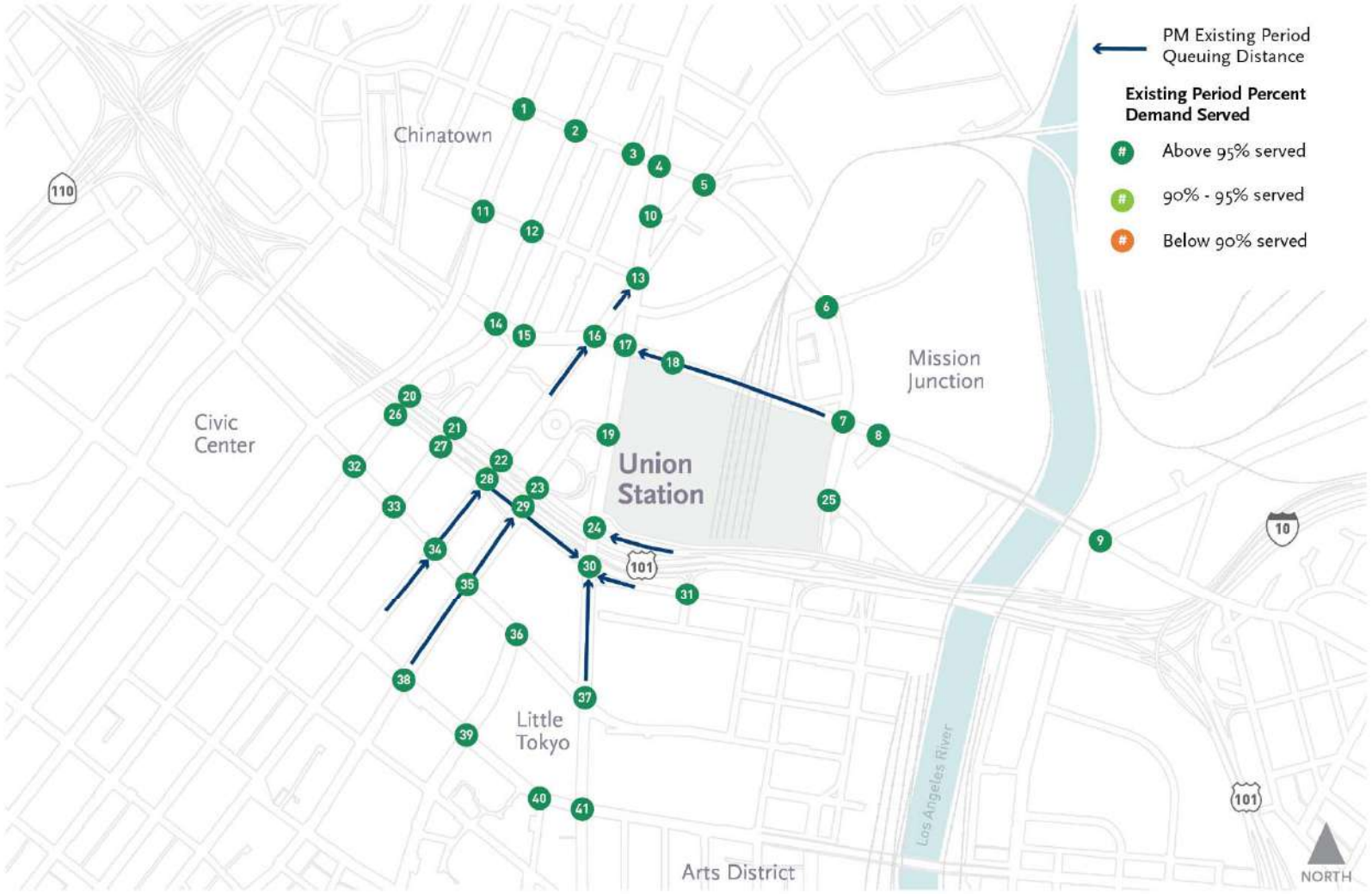
The percent demand served represents the sum of vehicles that pass through an intersection in the simulation divided by the number of vehicles that are expected to pass through the intersection based on volume inputs. When most intersections have demand served at or near 100 percent, it reflects a model where most vehicles are able to travel through the intersection within the peak hour. A 100 percent value in a congested network roughly represents an intersection that is operating at capacity. When percent served exceeds 100 percent, it indicates that an intersection has available capacity, and when it is less than 100 percent it indicates that demand is greater than the intersection capacity. While the vehicles will ultimately travel through the network, under conditions where percent demand served declines, it is indicative of peak spreading, when the periods of traffic congestion get longer.

Under existing conditions, all intersections served had at least a 95 percent demand served, except for North Spring Street & Arcadia Street in the AM peak hour, which had 94 percent demand served. Appendix H to the Draft EIR contains intersection-by-intersection percent demand served. Figure 3.17-8 and Figure 3.17-9 illustrate AM and PM peak hour existing percent demand served by intersection and a visualization of existing maximum queue lengths at key locations based on visual review of the simulation model runs.



Source: Fehr & Peers, 2017

Figure 3.17-8. Existing AM Peak Hour Percent Demand Served & Queuing



Source: Fehr & Peers, 2017

Figure 3.17-9. Existing PM Peak Hour Percent Demand Served & Queuing

Vehicle Travel Times

Vehicle travel times were recorded in both directions along three corridors:

1. Cesar E. Chavez Avenue from Broadway to Lyon Street
2. Alameda Street from Alhambra Street to Temple Street
3. Los Angeles Street from 1st Street to Alameda Street

The corridors were chosen because they are expected to be the most likely to be affected by the project. Cesar E. Chavez Avenue is the only local street between 1st Street and Main Street that crosses the Los Angeles River, and is the main east/west arterial in the study area. Alameda Street and Los Angeles Street are key north/south arterials in the network, and their lane configurations and signal phasing will be altered by the project. Results are shown below in Table 3.17-6, and are rounded to the nearest 15-second interval.

TABLE 3.17-6
EXISTING VEHICLE TRAVEL TIME

Corridor	Existing Average Travel Time (min:sec)	
	AM Peak Hour	PM Peak Hour
Cesar E. Chavez Avenue EB	2:15	3:30
Cesar E. Chavez Avenue WB	5:30	5:15
Alameda Street NB	4:15	3:15
Alameda Street SB	4:15	3:15
Los Angeles Street NB	2:15	4:00
Alameda Street SB	2:00	1:30

SOURCE: Fehr & Peers, 2017.

3.17.4 Thresholds of Significance

State CEQA Guidelines

In accordance with Appendix G of the CEQA Guidelines, the proposed project would have a significant impact related to transportation and traffic if it would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

- Substantially increase in hazards due to a design feature or incompatible uses.
- Result in inadequate emergency access.
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Additional thresholds used for each impact analysis are described below.

City of Los Angeles

LADOT has established threshold criteria to determine significant traffic impact of a proposed project in its jurisdiction. Under the LADOT guidelines, transportation impacts of proposed transportation infrastructure Projects (including transit, rail, bicycle, and other roadway improvements) should:

> use the Highway Capacity Manual's (HCM) delay-based methodology for signalized intersections. In such cases, micro-simulation may also be necessary to fully understand the effects of the Project in terms of queue lengths, traffic signal timing parameters, transit travel times, etc.

LADOT's criteria state that an intersection would be significantly impacted with an increase in delay equal to or greater than six seconds for intersections operating at LOS C, equal to or greater than four seconds for intersections operating at LOS D, and equal to or greater than 2.5 seconds for intersections operating at LOS E or F. Intersections operating at LOS A or B after the addition of the project traffic are not considered significantly impacted regardless of the increase in delay. Table 3.17-7 summarizes the impact criteria.

TABLE 3.17-7
CITY OF LOS ANGELES TRAFFIC IMPACT CRITERIA

LOS	Final Delay	Project-Related Increase in Delay
C	> 20 – 35	Equal to or greater than 6.0 seconds
D	> 35 – 55	Equal to or greater than 4.0 seconds
E or F	> 55	Equal to or greater than 2.5 seconds

SOURCE: LADOT Transportation Impact Study Guidelines, *December 2016.*

Congestion Management Program

The CMP was implemented to analyze the impacts of local land use decisions on the regional transportation system. Local jurisdictions are responsible for assessing the impacts of new development on the CMP system as part of the development review and entitlement process. CMP analyses are required only for project where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours to CMP arterial monitoring intersections, including monitored freeway onramps or off-ramps, or where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours to Mainline freeway monitoring locations.

The proposed project would have a significant impact on a CMP freeway or arterial monitoring location if it would:

- Increase traffic demand on a CMP facility by 2 percent of capacity (V/C x 0.02), causing LOS F (V/C > 1.00)
- If the facility is already at LOS F, it would increase traffic demand on a CMP facility by 2 percent of capacity (V/C x 0.02)

Freeway Off-Ramp Facilities

While not formally adopted by Caltrans, the following impact criteria has been applied for the analysis of the project:

- An impact is considered significant if the project contributes to an off-ramp queue that extends beyond the storage length of an off-ramp onto the freeway mainline

Emergency Access

In accordance with the State CEQA Guidelines, the determination of impacts to transportation/traffic should consider whether a project would result in inadequate emergency access.

Construction

The CEQA Guidelines do not include a criteria for the consideration of transportation-related construction impacts. Construction impacts typically rely upon a qualitative analysis of conditions pertaining to temporary impacts associated with construction, including temporary traffic impacts, loss of access, loss of bus stops or rerouting of bus lines and loss of on-street parking. For purposes of this EIR, the project would have a significant transportation-related impact from construction activities if it would:

- Result in a substantial disruption to traffic during construction, which could include temporary street closures; temporary loss of regular vehicular or pedestrian access to existing land uses; temporary loss of an existing bus stop or rerouting of bus lines; or creation of traffic hazards.

3.17.5 Future Transportation Network and Traffic Projections

The following sections describe the transportation network changes that are considered for future scenarios and the methodology used to generate traffic volume forecasts for future scenarios. The impact analysis presented in this EIR uses a 2029 horizon year to analyze the potential for project traffic impacts on surrounding street system. This is the anticipated opening year for the California High Speed Rail and the Link US projects at LAUS. While the project is expected to be constructed earlier, these two projects represent the most substantial planned changes to traffic conditions in the study area; and so the use of 2029 as an analysis year for the project represents a “worst case” analysis of the potential for project impacts.

Future Baseline Transportation Network Changes

LAUS Access & Transit Enhancements

All future networks include three changes related to improvements at LAUS:

- On the eastern side of LAUS, the new drop-off area (opened in Fall 2016) replaces Patsaouras Transit Plaza as the location where private vehicles can make drop-offs. The area can be accessed via the garage entrance at Ramirez Street & Vignes Street, through the helix ramp on the east side of Vignes Street, or via a new entrance on the west side of Vignes Street. Patsaouras Transit Plaza remains in the model, but is only used by transit vehicles.
- In order to reduce traffic in bus zones on Cesar Chavez Avenue, Metro moved bus stops at Vignes Street in July 2016. Buses that are traveling eastbound through the intersection will now stop at the new far-side stop. Buses that are turning right from Cesar Chavez Avenue to Vignes Street will continue using the nearside stop.
- In Fall 2016, Metro began construction on a new station along the El Monte busway, adjacent to LAUS. The new station will be located in the median of the busway, south of Patsaouras Transit Plaza and next to the US-101 freeway, serving the Metro Silver line and other buses operating on the busway. Construction of a new pedestrian bridge will connect the new station to Patsaouras Transit Plaza and LAUS. The new station is scheduled to open in Spring 2018. Many of the bus routes that serve the existing bus stop at Alameda Street and the Express Lanes entrance will be rerouted to this new facility, which is expected to reduce pedestrian activity across the Express Lanes entrance and the US 101 Northbound Off-Ramp on Alameda Street. This reduction in pedestrian activity may ultimately have traffic operational benefits at this intersection by reducing the number of pedestrians crossing, and therefore increasing potential gaps where vehicles could enter the Express Lanes. However, to ensure a “worst case” analysis of project-related traffic impacts in this location, the simulation model does not account for this potential benefit.

Two regional rail projects are incorporated into the future network:

- LinkUS: The Link Union Station project (LinkUS) was previously known as the Southern California Regional Interconnector Project (SCRIP) and aims to improve station efficiency and service. Improvements as part of the project include extending current ‘dead-end’ tracks across the US-101 freeway south of the station, turning them into ‘through’ tracks; reconfiguring station entry tracks, as well as the station arrival and boarding area; adding a new passenger concourse with retail, food services, passenger waiting areas, and other amenities; adding a new loop track; and accommodating future transportation improvements, such as High-Speed Rail.
- High-Speed Rail: LAUS will serve as a hub in California’s High-Speed Rail system, which will connect San Francisco to Los Angeles and Anaheim, and eventually Sacramento and San Diego. Southbound high-speed trains will join the existing Los Angeles-San Diego-San Luis Obispo (LOSSAN) Rail Corridor after a multimodal station adjacent to Hollywood Burbank Airport. The high-speed trains will then service Los Angeles Union Station on new run through tracks (part of

Link US project) and then continue along the corridor to the existing Anaheim Regional Transportation Intermodal Center (ARTIC) in Orange County.

- West Santa Ana Branch: The West Santa Ana Branch is a planned light rail transit corridor that would connect Southeast Los Angeles County with Downtown Los Angeles at Union Station. The ultimate alignment for this corridor has not been selected, but the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) model network used to calculate area traffic growth in this study, as detailed below, includes the West Santa Ana Branch with the Pacific/Alameda station option.

These projects are not anticipated to alter the future roadway network, but are expected to alter the number of vehicle trips traveling to and from LAUS. As such, they are treated as related projects. Discussion of related projects trip assignment is included below.

Active Transportation Corridors

The City of Los Angeles and/or Metro are implementing bicycle facilities in the study area, including some corridors identified in the ConnectUS Action Plan[4] or Mobility Plan 2035. Some of these corridors will result in the repurposing of general travel lanes. The projects in the study area are divided into two groups: projects with secured funding (funded projects) and projects without secured funding (unfunded projects).

On the direction of LADOT the additional ConnectUS Action Plan projects that are unfunded are detailed and analyzed in Appendix H to provide an analysis of the project if the entire ConnectUS Action Plan network (both funded and unfunded projects) is implemented in the Future baseline.

The following funded projects are located in the study area:

- Spring Street separated bikeway, replacing the existing bikeway south of Cesar E. Chavez Avenue to the southern edge of the study area: The design of the bikeway has not been finalized, but it is not expected to reduce the number of general purpose lanes on the street, with the exception of the bridge over U.S. 101, which will be reduced from three lanes southbound to two lanes.
- Main Street separated bikeway, replacing the existing bikeway south of Cesar E. Chavez Avenue to the southern edge of the study area: The design of the bikeway has not been finalized, but it is not expected to reduce the number of general purpose lanes on the street.
- New bikeway on San Pedro Street/Judge John Aiso Street, south of Temple Street to the southern edge of the study area: The design of the bikeway has not been finalized, but it is

[4] Metro is implementing some ConnectUS projects around the Arts District/Little Tokyo Regional Connector station. Those projects are undergoing their own design and environmental review process.

expected to reduce the number of general travel lanes from two to one in each direction.

- New bikeway on 1st Street, east of San Pedro Street/Judge John Aiso Street to the eastern edge of the study area: The design of the bikeway has not been finalized, but it is expected to reduce the number of general travel lanes from two to one in each direction.
- New bikeway on Vignes Street/Ramirez Street east of LAUS to the intersection with Commercial Street: The design of the bikeway has not been finalized, but it is expected to reduce the number of general travel lanes from two to one in each direction on portions of the street.
- New biking and walking Esplanade on Alameda Street from Commercial Street to First Street: The design of the esplanade has not been finalized, but it is not expected to reduce the number of general travel lanes.
- New bikeway on Ramirez Street and Center Street, from Vignes Street to Commercial Street: The design of the bikeway has not been finalized, but it is expected to reduce the number of general travel lanes from two to one in each direction.

Intersection geometric changes associated with these projects are illustrated in Appendix H. Immediately outside of the study area, additional active transportation improvements are funded in the Arts District as part of the ConnectUS Action Plan.

Future without Project (2029) Scenario

To evaluate the potential impacts of the proposed project on future (Year 2029) conditions, it was necessary to develop estimates of future traffic conditions in the area both without and with the project. First, estimates of traffic growth were developed for the study area to forecast future conditions without the project. These forecasts included traffic increases as a result of both regional ambient traffic growth and traffic generated by specific developments in the vicinity of the project (cumulative development projects) not covered by ambient growth rates. These projected traffic volumes represent Future without Project conditions. The approach and analysis methodologies used to develop these traffic forecasts are detailed below.

Ambient Growth

Based on historic trends and with the concurrence of LADOT, it was established that an ambient growth factor of 0.2% per year should be applied to adjust the existing base year traffic volumes to reflect the effects of regional growth and development by year 2029. The 0.2% growth rate was validated through a review of the forecast annual growth rate in traffic from the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) travel demand model between the existing baseline and horizon year (2040) for the traffic analysis zones (TAZ) within and adjacent to the study area. Additionally a list of related projects in the study area was obtained from LADOT. The growth in TAZ land use contained in the SCAG model between the base year and the horizon year was sufficient to cover most of the cumulative development projects on LADOT's list. However, to ensure that the traffic forecasts sufficiently include traffic expected to be generated from the related projects located closest to the station, additional traffic volumes from those projects were added on top of the application of

the ambient growth rate to the existing (year 2015) traffic volume data. The ambient growth accounts for predicted growth of all cumulative projects except those noted below.

Cumulative Projects Traffic Generation and Assignment

Project-only traffic volumes for these projects were applied directly to the study intersections on top of the ambient growth rates. Turning movement volumes from individual project reports and Memoranda of Understanding[5] were used to estimate future trips for all cumulative development projects except for California High Speed Rail, and all trips were assigned to the edge of the study area. Volume estimates for California High Speed Rail were received directly from California High Speed Rail Authority. Mode split data provided by California High Speed Rail were used in the evaluation of AM and PM peak hour analysis.

Five cumulative projects were identified adjacent to the project site, as shown in Table 3.17-8. The location of these projects are illustrated in Figure 3.17-10. Cumulative development project-only volumes are illustrated in Appendix H.

TABLE 3.17-8
CUMULATIVE DEVELOPMENT PROJECT TRIP GENERATION

Project	Daily Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
1. La Plaza Cultura	3,585	49	118	167	189	131	320
2. High Speed Rail	[A]	255	245	500	255	245	500
3. Link US	1,516	10	7	17	81	46	127
4. College Station	6,583	169	290	461	307	201	509
5. Men's Central Jail	900	-12	26	14	-25	142	117

NOTE: [A] Daily trip generation for high speed rail not provided.
SOURCE: Fehr & Peers, 2017.

Future without Project Simulation Model Run

Future without Project weekday AM and PM peak hour traffic volumes were developed with the application of ambient growth and cumulative development project volumes. These represent the baseline traffic volumes for analyzing the potential for project-related traffic impacts. Future without Project volumes are illustrated in Appendix H. Future without Project traffic volumes, intersection

[5] *Consolidated Correctional Treatment Facility Transportation Impact Analysis Draft Report*. June 2016.
Expanded Traffic Study Draft report: Link Union Station. September 6, 2016.
"Traffic Study – Memorandum of Understanding (MOU) for College Station". January 14, 2016.
La Plaza Cultura Village Project Draft Environmental Impact Report, Volume I. July 2014

geometric changes, and other transportation network changes were input into the simulation model, which was run to calculate Future without Project transportation performance metrics, and is used as the baseline to assess the potential for project impacts.

Future with Project (2029) Scenario

Proposed Project Transportation Network Changes

The project includes the following network changes:

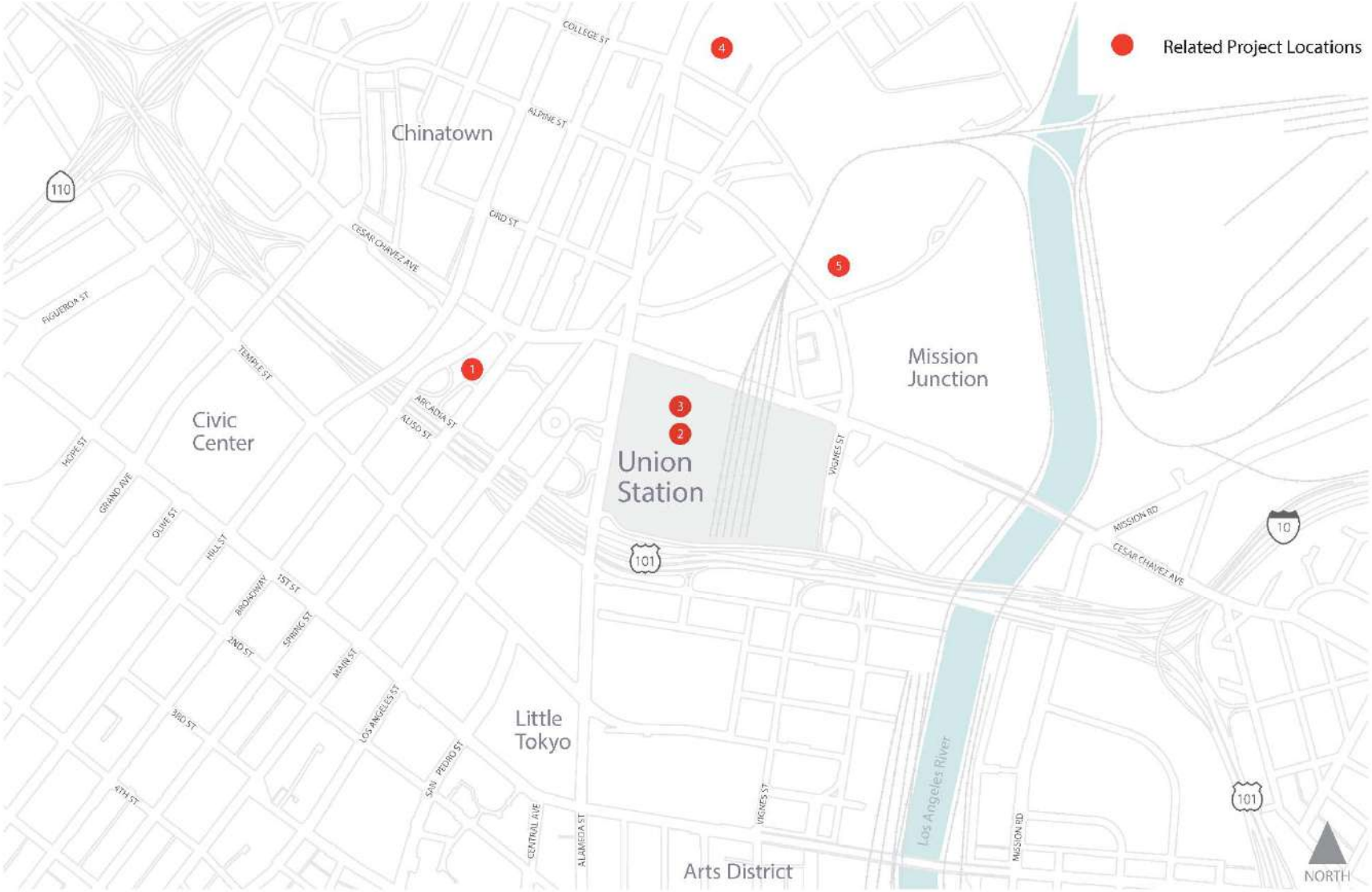
- Lane repurposing on Alameda Street between Cesar Chavez Avenue and Arcadia Street for curb-side drop-off on east side and wider sidewalks on west side. The project is expected to reduce the number of general travel lanes from three to two in each direction.
- Lane repurposing on Arcadia Street between Alameda Street and Spring Street to accommodate tour bus parking. The project is expected to reduce the number of general travel lanes from three to two.
- Removal of parking lot in front of station north of the existing driveway. The removal of the lot will result in a loss of approximately 60 spaces.
- Partial closure of Los Angeles Street at Alameda Street by eliminating the northern leg of Los Angeles Street and the northern leg of the LAUS driveway. The east and west approaches will be consolidated into 2-way southern legs of Los Angeles Street and the LAUS Driveway. The east and west approaches will also be narrowed from their existing three lanes to two lanes each. The existing buffered bike lane on Los Angeles Street will be retained with this modification.
- Consolidation of east/west crosswalks at Alameda Street and Los Angeles Street to the northern leg of the intersection. Signal timing at the intersection will be adjusted to give this crossing a dedicated signal phase that does not conflict with any vehicle movements, which is made possible by the crosswalk consolidation (which includes the removal of the southern crosswalk). Crosswalk consolidation also allows for vehicles exiting Union Station to travel onto Los Angeles Street (southbound) or turn left onto Alameda Street (southbound) without conflicting with the pedestrian crossings.

The intersection geometric changes associated with these project elements are illustrated in Appendix H.

Future with Project (2029) Traffic Volumes

The project is not anticipated to generate new trips, but the following changes with traffic routing is expected near the station:

- Shift in some drop-off activity from the existing drop-off area on the western side of the station to the new curbside drop-off zone on Alameda Street. Taxis and some other drop off activity will continue at the existing location. This change will result in fewer vehicles exiting the station at the driveway on Cesar Chavez.



Source: Fehr & Peers, 2017

Figure 3.17-10. Cumulative Development Project Locations

- People currently using the parking lot on the western side of the station will shift to use the One Gateway garage on the eastern side of the station because the parking lot will be removed to accommodate the Forecourt.

Appendix H illustrates the expected project related traffic shifts. These volumes were added to the Future without Project traffic volumes to develop the Future with Project (2029) traffic volumes.

Future with Project (2029) Simulation Model Run

The project-related network changes and traffic volumes were used to modify the Future without Project model, and rerun to assess the transportation performance of the Future with Project Scenario.

Future (2029) Percent Demand Served

The addition of traffic volumes from ambient growth and cumulative development projects, and the repurposing of vehicle capacity associated with both the Future baseline network changes and the project network changes, will increase traffic congestion in the network and decrease the percent demand served. In the AM peak hour, Future without Project (2029) scenario, 24 intersections are able to serve over 95% of demand, 12 are able to serve between 90-95% of demand, and 5 serve less than 90% of demand. In the AM Future with Project (2029) scenario, these numbers become six, 20, and 15, respectively. In the PM peak hour Future without Project (2029) scenario, 15 intersections are able to serve over 95% of demand, 17 are able to serve between 90-95% of demand, and 9 serve less than 90% of demand. With the addition of the project in the PM peak hour, the numbers change to 6, 13, and 22, respectively.

The decrease in percent demand served indicates that future demand for vehicle travel in the network will exceed the available capacity to a greater extent than existing demand exceeds network capacity today. This indicates that periods of congestion could be longer in the future, or due to travel time changes motorists may choose to switch to other modes, such as transit, or shift discretionary travel to other times of day.

As the percent demand served at many intersections is below 95%, the delay values and LOS at these intersections may not represent the full delay if all vehicles were able to access the intersection. Appendix H contains information on percent demand served by intersection for the Future without Project and Future with Project scenarios. Figures 3.17.11 and 3.17.12 illustrate the AM and PM peak hour percent demand served by intersection and a visualization of maximum queue lengths at key intersections based on a visual review of the simulation model runs for the Future without Project (2029) scenario. Figures 3.17.13 and 3.17.14 visualize the same information for the Future with Project (2029) scenario.

Future (2029) Vehicle Travel Times

Vehicle travel times were recorded using the simulation model in both directions along three corridors:

1. Cesar E. Chavez Avenue from Broadway to Lyon Street
2. Alameda Street from Alhambra Street to Temple Street
3. Los Angeles Street from 1st Street to Alameda Street

Results are shown in Table 3.17-9.

TABLE 3.17-9
FUTURE (2029) VEHICLE TRAVEL TIMES

Corridor	Future without Project (2029) Average Travel Time (min:sec)		Future with Project (2029) Average Travel Time (min:sec)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Cesar E. Chavez Avenue EB	2:30	4:45	2:15	4:30
Cesar E. Chavez Avenue WB	6:30	8:15	5:30	8:00
Alameda Street NB	7:15	3:30	7:15	4:15
Alameda Street SB	6:00	3:30	9:00	4:15
Los Angeles Street NB	2:30	4:15	3:00	10:30
Alameda Street SB	2:15	1:30	2:15	1:45

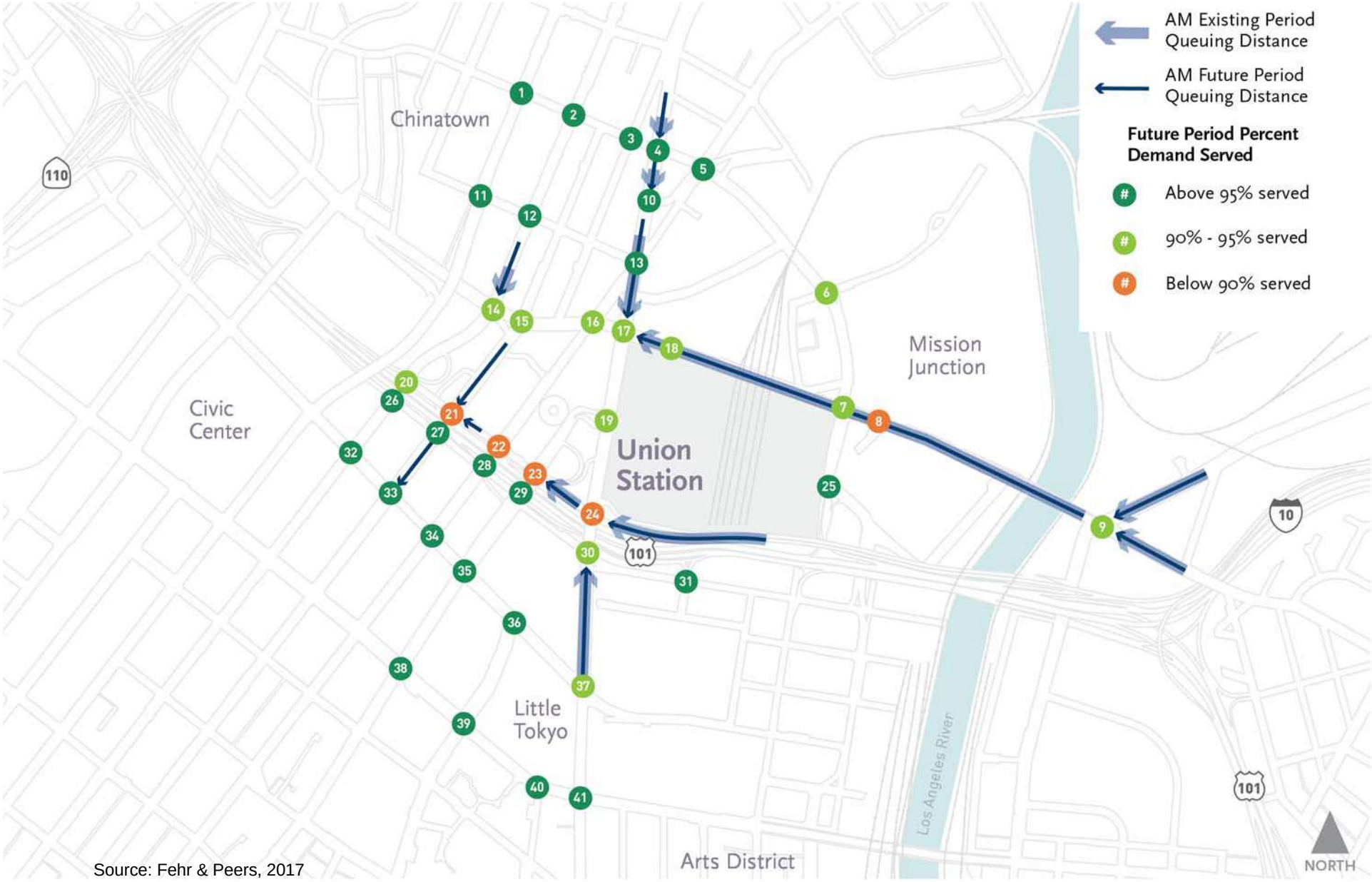
SOURCE: Fehr & Peers, 2017.

The largest increases in travel time from Existing to Future without Project (2029) and Future with Project (2029) occur at the following locations during the AM peak hour:

- Alameda Street southbound: increased vehicle trips traveling towards the downtown Los Angeles CBD increase congestion, which is exacerbated by the reduction in vehicle capacity on Alameda Street from the project.
- Alameda Street northbound: increased vehicle trips traveling away from the downtown Los Angeles CBD, where housing is expected to continue increasing, lead to additional congestion. However, the addition of the project does not worsen travel times.

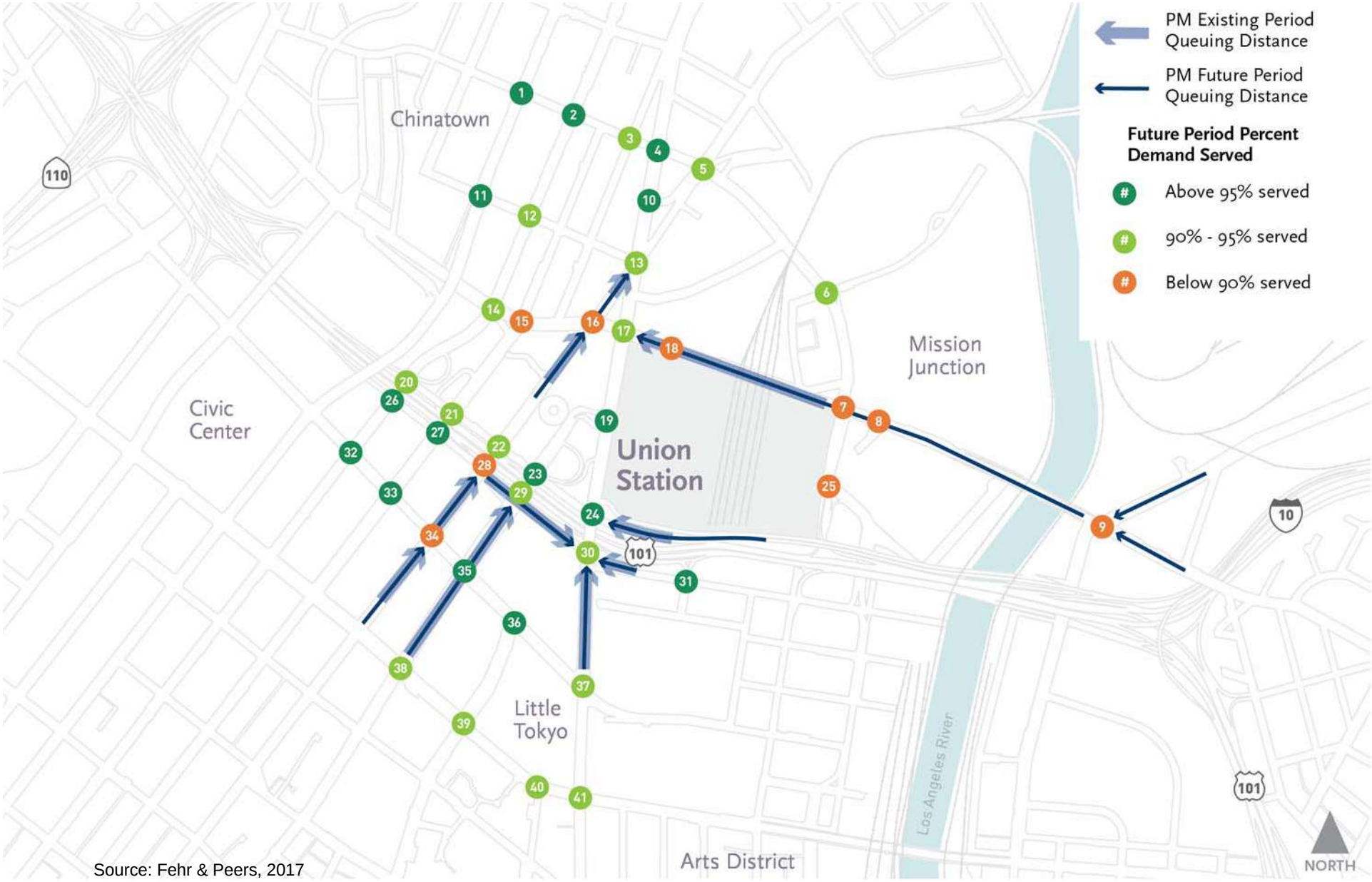
The largest changes in travel times in the PM peak hour are located along:

- Cesar E. Chavez Avenue westbound: increased vehicle trips traveling towards the downtown Los Angeles CBD, including cumulative development projects, increase congestion. However, the addition of the project does not worsen travel times.
- North Los Angeles Street northbound: travel time remains similar between existing and Future without Project (2029). However, the implementation of the project reduces the capacity of North Los Angeles Street at Alameda Street, and signal timing is reconfigured to include a dedicated east/west pedestrian phase. These changes markedly increase queuing for northbound vehicles on North Los Angeles Street, increasing congestion on the corridor and lengthening travel times.



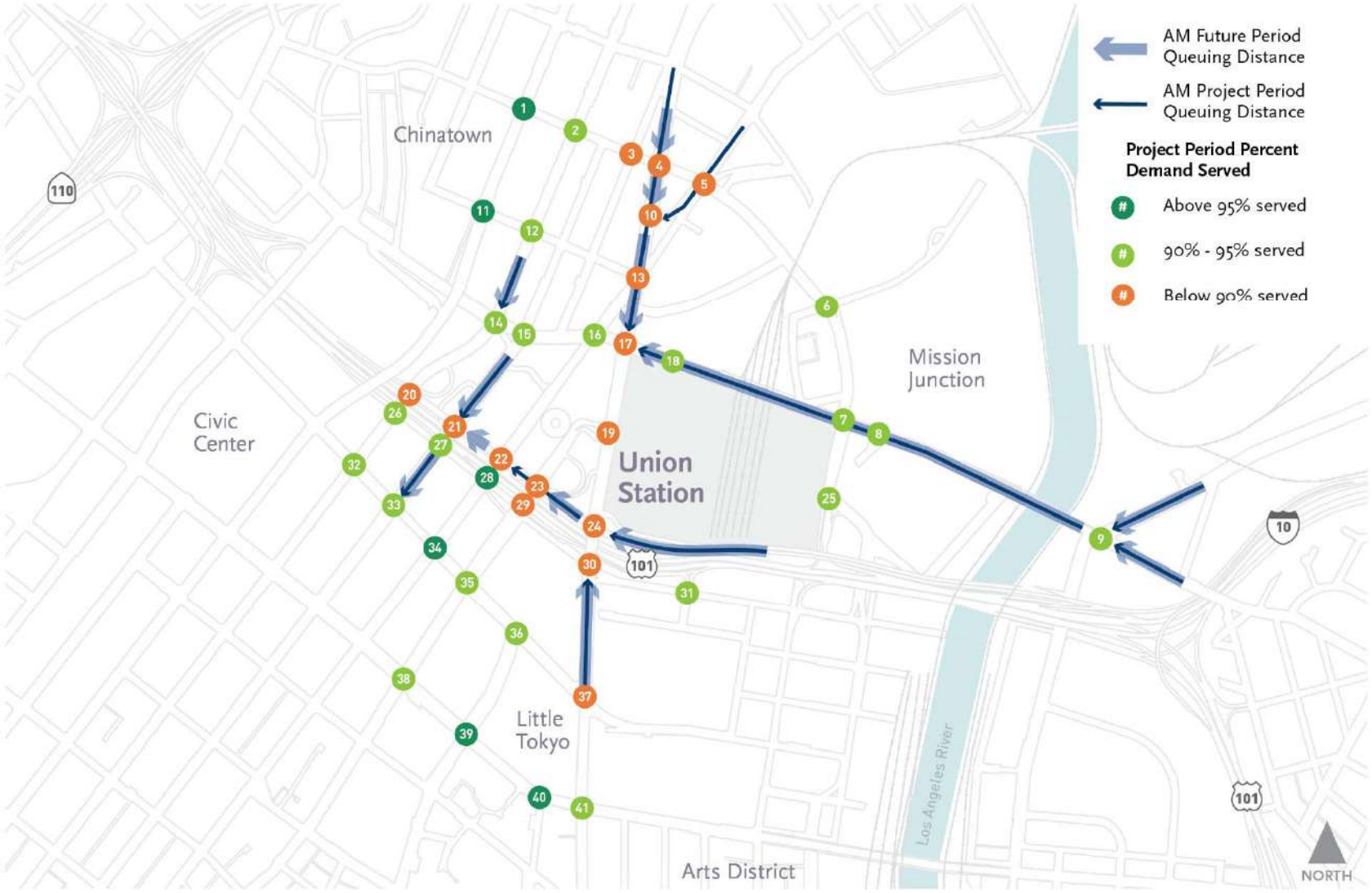
Source: Fehr & Peers, 2017

Figure 3.17-11. Existing and Future AM: Queuing Distance & Intersection Demand Served



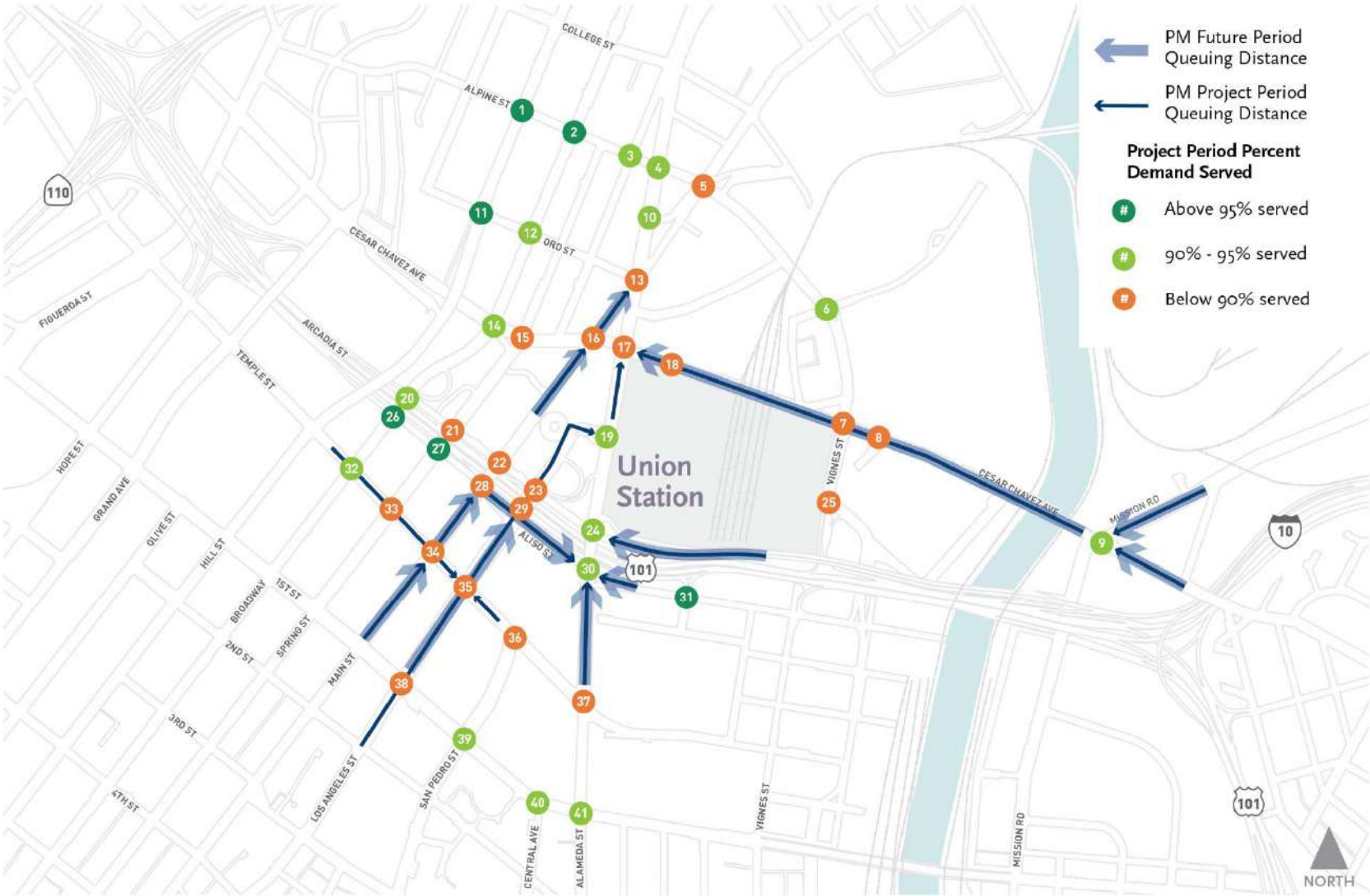
Source: Fehr & Peers, 2017

3.17-12. Existing and Future PM: Queuing Distance & Intersection Demand Served



Source: Fehr & Peers, 2017

3.17-13. Future with Project (2029) AM Peak Hour Percent Demand Served & Queuing



Source: Fehr & Peers, 2017

3.17-14. Future with Project (2029) PM Peak Hour Percent Demand Served & Queuing

Future (2029) Transit Travel Times

Transit travel times were recorded in both directions using the simulation model along two corridors using the simulation model for the Future without Project (2029) and Future with Project (2029) scenarios:

1. Alameda Street from north of the U.S. 101/Express Lanes on-ramp to Cesar E. Chavez Avenue
2. Spring Street and Cesar E. Chavez Avenue from Spring Street & Arcadia Street to Cesar E. Chavez Avenue & Alameda Street

Results are shown in Table 3.17-10.

TABLE 3.17-10
FUTURE (2029) TRANSIT TRAVEL TIME

Corridor	Routes Included	Future without Project Average Travel Time (min:sec)		Future with Project Average Travel Time (min:sec)	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Alameda Street NB	MTA 40, CE 431, Foothill 699, OCTA 701, AVTA 785, CE 534	0:45	1:15	1:30	1:30
Alameda Street SB	MTA 40, OCTA 701	1:30	1:30	2:00	1:15
Spring Street/Cesar E. Chavez Avenue NB	MTA 68, MTA 70/71, MTA 728, MTA 733, MTA 745, MTA 78/79, MTA 378, MTA 770	1:45	2:15	1:45	2:15
Spring Street/Cesar E. Chavez Avenue SB	MTA 70/71, MTA 78/79, MTA 378, MTA 728, MTA 770	3:15	3:00	3:00	3:00

SOURCE: Fehr & Peers, 2017.

Transit travel times remain similar along all corridors compared with existing conditions, and between Future without Project (2029) and Future with Project (2029) scenarios, with the increase in travel time maxing out at 45 seconds. While not specifically analyzed for transit travel time due to the limited number of transit routes that operate on Los Angeles Street, due to the substantial increase in vehicular travel time on this corridor, as shown in Table 3.17-9, transit travel times for the following three routes on Los Angeles Street are expected to be affected by the project:

- Big Blue Bus Rapid 10
- LADOT DASH Downtown B
- LADOT Commuter Express 534
- Metro 442

3.17.6 Environmental Impacts/Environmental Consequences

This section assesses potential impacts associated with the proposed project and, if necessary, identifies mitigation measures to eliminate or reduce impacts. The methodology implemented in this assessment consists of evaluating whether the proposed project would have significant transportation and traffic impacts according to the above-stated thresholds. Impacts are primarily assessed by considering the project objectives and proposed uses in light of the regulatory setting as well as the existing and surrounding uses described above.

(a) Would the project result in a substantial disruption to traffic during construction, which could include temporary street closures; temporary loss of regular vehicular or pedestrian access to existing land uses; temporary loss of an existing bus stop or rerouting of bus lines; or creation of traffic hazards?

Impact Analysis

No significant impacts are expected to occur based on these criteria.

Construction of the project would begin after design is completed and would continue for approximately seven months. Construction would take place over four phases:

1. Demolition, including removal of the parking lot and affected trees
2. Site preparation
3. Grading
4. Paving, including restriping and new lane configurations

During each of these phases new off-site trips would be generated by construction workers, large trucks hauling soil and debris from the site, trucks delivering construction equipment to/from the site (such as bulldozers, excavators and other large items of machinery), and large trucks delivering concrete and other construction materials. This would include the construction of a small transit-serving building on the northern portion of the project area boundary. The LAMC provides that construction activities are limited to the hours from 7:00 AM to 9:00 PM on weekdays and from 8:00 AM to 6:00 PM on Saturdays and holidays. No construction is permitted on Sundays. The estimated number of trips per day for each period is provided in Table 3.17-11. During the demolition phase, a total of 22 daily round trips are anticipated across all construction trip types. Construction workers are expected to represent most of the construction-related traffic. Because construction works often travel outside of typical commute hours, these trips are expected to have a negligible effect on intersection operating conditions in the study area. Construction worker parking will occur on-site in locations with available parking supply, such as the One Gateway garage.

TABLE 3.17-11
ESTIMATED CONSTRUCTION TRIPS

Construction Phase	Days of Phase	Construction Trips per Day Estimates			
		Worker	Vendor	Hauling	Total
Demolition	40	18	0	4	22
Site Preparation	30	8	2	4	14
Grading	40	8	2	0	10
Paving	30	13	7	0	20

SOURCE: Sapphos Environmental, Inc. / Fehr & Peers, 2017.

LADOT generally considers construction-related traffic to cause adverse but not significant impacts because, while sometimes inconvenient, construction-related traffic effects are temporary. LADOT requires implementation of a construction-period traffic management plan, including worksite traffic control plans where work would occur within the public right-of-way, to ensure that any construction-related effects are minimized to the greatest extent possible.

At times during the construction of the proposed project, the delivery of materials and equipment could create impacts on the adjacent roadway network based on the following considerations:

- There may be intermittent periods when large numbers of material deliveries are required, such as when concrete trucks will be needed for the new esplanade.
- Some of the materials and equipment could require the use of large trucks (18-wheelers), which could create additional congestion on the adjacent roadways.
- Delivery vehicles may need to park temporarily on adjacent roadways such as Los Angeles Street and Arcadia Street as they deliver their items.

Potential impacts associated with construction of the project, e.g., partial lane closures, would be limited to those locations within or immediately adjacent to the project site. Segments of Alameda Street, Los Angeles Street, and Arcadia Street would have short-term impacts at locations where curb cuts, curb landscaping, etc. are installed. Temporary lane closures and, potentially, temporary sidewalk closures along portions of the perimeter of the project site may occur, but some level of pedestrian and bicycle access around the site will be adequately maintained during construction.

A construction traffic management plan, including street closure information, detour plans, haul routes, and staging plans should be prepared and submitted to LADOT for review and approval prior to the start of any construction work. This plan would include such elements as the designation of haul routes for construction-related trucks, the location of access to the construction site, any driveway turning movement restrictions, temporary traffic control devices or flagmen, travel time restrictions (if any) for construction-related traffic to avoid peak travel periods on selected roadways, consolidating construction truck deliveries, and designated staging and parking areas for equipment and workers. If oversized vehicles or loads are to be transported over State highways, a permit would be required from Caltrans.

As most construction activities will occur within a public street right-of-way, the following construction management standard practices will be implemented:

- A site-specific construction worksite traffic control plan should be prepared and submitted to LADOT for review and approval prior to the start of any construction work within the public right-of-way. This plan shall include such elements as the location of any lane closures, restricted hours during which lane closures (if any) would not be allowed, local traffic detours (if any), protective devices and traffic controls (such as barricades, cones, flag persons, lights, warning beacons, temporary traffic signals, warning signs), access limitations for abutting properties (if any), and provisions to maintain emergency access through construction work areas.
- Provide safety precautions for pedestrians and bicyclists with measures such as protection barriers and signage indicating alternative pedestrian and bicycle access routes where existing facilities would be affected.
- Provide advance notice of planned construction activities to any affected residents, businesses, and property owners in the vicinity of the construction site.
- Coordinate with emergency service providers (police, fire, ambulance and paramedic services) to provide advance notice of ongoing construction activity and construction hours.
- Coordinate with public transit providers (Metro, LADOT DASH, etc.) to provide advance notice of ongoing construction, construction hours. Determine bus stops that would be affected by construction and appropriate bus stop relocation.

Based on the implementation of the construction management measures, the proposed project will not result in a substantial disruption during the construction phase, and so no significant impact would occur under Impact Criteria 3.17.1.

Mitigation Measures

No mitigation measures are required.

(b) Would the proposed project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?

Significant and unavoidable impacts are expected to occur under this criteria related to intersections and freeway ramps. No other significant impacts are expected to occur under these criteria.

The following section details the impact analysis for the transportation modes identified in the above impact criteria:

Intersections and Streets

Future without Project (2029) Intersection Levels of Service

Table 3.17-12 presents the average delay and LOS for each of the analyzed intersections in the AM and PM peak hours under the Future without Project (2029) scenario. As shown, 26 of the 41 study intersections are estimated to operate at LOS D or better during both the AM and PM peak hours. The following 15 intersections are estimated to operate at LOS E or F, during one or both of the analyzed peak hours:

4. Alameda Street & Alpine Street
7. North Vignes Street & Cesar E. Chavez Avenue
8. Lyon Street & Cesar E. Chavez Avenue
9. Mission Road & Cesar E. Chavez Avenue
14. Broadway & Cesar E. Chavez Avenue
18. Union Station Driveway & Cesar E. Chavez Avenue
24. Alameda Street & Arcadia Street
25. North Vignes Street & Ramirez Street
30. Alameda Street & Aliso Street
32. Broadway & West Temple Street
34. North Main Street & Temple Street
35. North Los Angeles & East Temple Street
37. Alameda Street & Temple Street
38. North Los Angeles & East 1st Street
41. Alameda Street & East 1st Street

Future with Project (2029) Intersection Levels of Service

Table 3.17-12 also presents the average delay and LOS for each of the analyzed intersections in the AM and PM peak hours under the Future with Project (2029) scenario. As shown, 22 of the 41 study intersections are estimated to operate at LOS D or better during both the AM and PM peak hours. The following 19 intersections are estimated to operate at LOS E or F, during one or both of the analyzed peak hours:

4. Alameda Street & Alpine Street
5. North Main Street & Alpine Street
7. North Vignes Street & Cesar E. Chavez Avenue
8. Lyon Street & Cesar E. Chavez Avenue
9. Mission Road & Cesar E. Chavez Avenue
10. Alameda Street & Alhambra Avenue
14. Broadway & Cesar E. Chavez Avenue
18. Union Station Driveway & Cesar E. Chavez Avenue
19. Alameda Street & North Los Angeles Street
24. Alameda Street & Arcadia Street
25. North Vignes Street & Ramirez Street
29. North Los Angeles & Aliso Street

30. Alameda Street & Aliso Street
31. Broadway & West Temple Street
32. North Main Street & Temple Street
33. North Los Angeles & East Temple Street
34. South San Pedro Street & East Temple Street
35. Alameda Street & Temple Street
36. North Los Angeles & East 1st Street

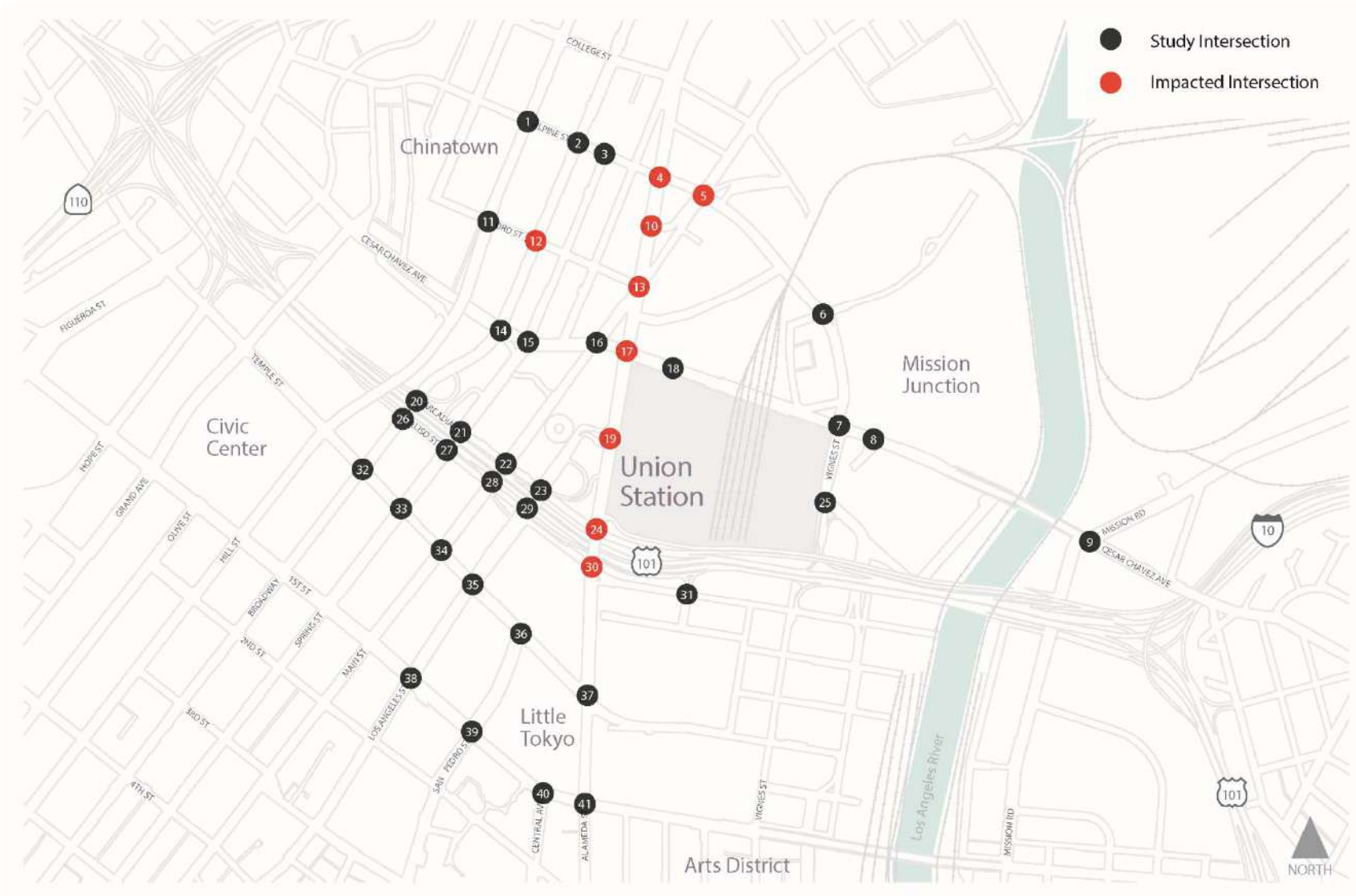
Impact Analysis

As shown in Table 3.17-12, applying the criteria for determination of significant impacts used by LADOT, the proposed project would create significant traffic impacts at 16 intersections under the Future with Project (2029) scenario:

4. Alameda Street & Alpine Street (AM Peak Hour)
5. North Main Street & Alpine Street (AM Peak Hour)
10. Alameda Street & Alhambra Avenue (AM Peak Hour)
12. North Broadway & Ord Street (AM Peak Hour)
13. North Main Street & Alameda Street (AM Peak Hour)
17. Alameda Street & Cesar E. Chavez Avenue (Both Peak Hours)
19. Alameda Street & North Los Angeles Street (Both Peak Hours)
23. North Los Angeles Street & Arcadia Street (PM Peak Hour)
24. Alameda Street & Arcadia Street (Both Peak Hours)
29. North Los Angles Street & Aliso Street (PM Peak Hour)
30. Alameda Street & Aliso Street (AM Peak Hour)
32. North Broadway & Temple Street (PM Peak Hour)
33. North Spring Street & Temple Street (PM Peak Hour)
34. North Main Street & Temple Street (PM Peak Hour)
35. North Los Angeles Street & Temple Street (PM Peak Hour)
36. Judge John Aiso & Temple Street (PM Peak Hour)
38. Los Angeles Street & Temple Street (PM Peak Hour)

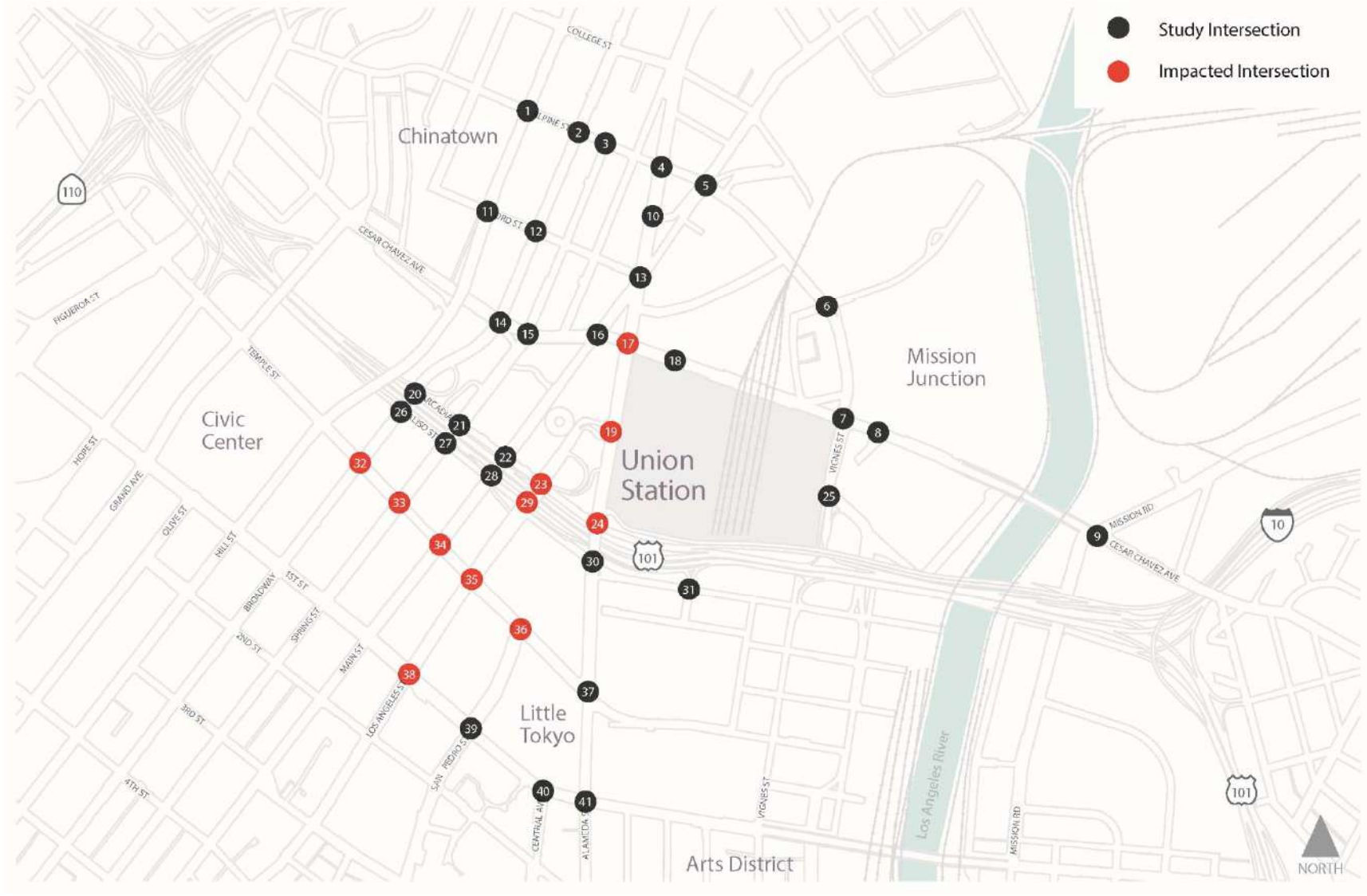
While not a study intersection, the signalized intersection of Alameda Street/Spring Street & College Street is just north of Intersection 4 (Alameda Street & Alpine Street), which is significantly impacted during the AM peak hour. Due to the queuing observed in the simulation model, the project could have a negative effect on traffic operations at the Alameda Street/Spring Street & College Street intersection during the AM peak hour, so a significant impact is deemed expected to occur at this intersection. The next signalized intersection on Spring Street is located a considerable distance away, so is not expected to be significantly impacted.

The location of these significantly impact intersections are illustrated in Figures 3.17.15 and 3.17.16 for the AM and PM peak hours, respectively.



Source: Fehr & Peers, 2017

Figure 3.17-15. Future with Project (2029) Scenario Significant Impacts AM Peak Hour



Source: Fehr & Peers, 2017

Figure 3.17-16. Future with Project (2029) Scenario Significant Impacts PM Peak Hour

Mitigation Measures

The project objectives include the following:

- Protect and enhance Los Angeles Union Station as a national historic resource by advancing clear site lines and view sheds to the station.
- Prioritize connectivity, convenience, and safety for the most vulnerable users (pedestrians, bicyclists, transit patrons, and community stakeholders) to safely navigate to and from the project site.
- Advance desirable and accessible public space at the LAUS forecourt that creates a visually porous and permeable connection between Union Station and the surrounding historic and cultural communities.
- Facilitate alternatives to driving by providing infrastructures that enable more walking and bicycling consistent with the objectives of the Climate Action and Adaptation Plan.
- Enhance the safety and quality of pedestrian and bicycle connections between the station and El pueblo historic Monument, Father Serra Park, Olvera Street, and nearby business and neighborhood consistent with identified strategies in the Southern California Association of Governments 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy.
- Advance sustainability by providing for reduced consumptive water use in a cost effective manner consistent with provisions of Metro's Water Action Plan and improving multi-modal facilities that encourage active transportation and reduction in vehicle miles traveled.
- Advance comprehensive planning for Los Angeles Union Station that leverages it as the major regional transportation hub, a destination, and one of the city's foremost landmarks.

Due to inconsistency with these objectives, physical traffic capacity mitigation measures, such as widening intersections, are considered infeasible because roadway widening to accommodate additional turn lanes, through lanes, etc. increase pedestrian crossing distances and exposure to vehicle turning movements. Therefore no feasible physical mitigation is identified.

Signal timing modifications could partially mitigate project impacts in concert with other operational enhancements. Two alternatives, discussed in Section 4.0, *Alternative Analysis*, reduce vehicle impacts by eliminating certain movements at the intersection of Los Angeles Street & Alameda Street, and providing signal timing operational enhancements. These alternatives are consistent with project objectives. While the project alternatives reduce the number of significant traffic impacts, they do not fully reduce all significant impacts, so regardless of whether the project or alternatives are selected, significant and unavoidable traffic impacts will remain at between nine and 16 intersections, depending on whether the project or one of the two project alternatives are selected.

TABLE 3.17-12
FUTURE WITH PROJECT (2029) LOS AND IMPACT ANALYSIS

#	N/S Street	E/W Street	Future without Project (2029)				Future Year 2029 plus Project							
			AM		PM		AM		PM		AM		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delta	Impact?	Delta	Impact?
1	North Hill Street	Alpine Street	18	B	18	B	18	B	18	B	0	NO	0	NO
2	North Broadway	Alpine Street	24	C	19	B	28	C	19	B	4	NO	0	NO
3	North Spring Street	Alpine Street	25	C	16	B	21	C	16	B	-4	NO	0	NO
4	Alameda Street	Alpine Street	59	E	15	B	115	F	16	B	56	YES	1	NO
5	North Main Street	Alpine Street/Vignes Street	23	C	31	C	109	F	32	C	86	YES	1	NO
6	Vignes Street	Bauchet Street	10	B	13	B	10	B	13	B	0	NO	0	NO
7	Vignes Street	Cesar E. Chavez Avenue	35	C	62	E	31	C	56	E	-4	NO	-6	NO
8	Lyon Street	Cesar E. Chavez Avenue	116	F	120+	F	53	D	109	F	-63	NO	-11	NO
9	Mission Road	Cesar E. Chavez Avenue	120+	F	120+	F	120+	F	102	F	0	NO	-18	NO
10	Alameda Street	Alhambra Avenue	21	C	13	B	120+	F	13	B	99+	YES	0	NO
11	North Hill Street	Ord Street	14	B	13	B	14	B	13	B	0	NO	0	NO
12	North Broadway	Ord Street	23	C	22	C	40	D	21	C	17	YES	-1	NO
13	Alameda Street	Main Street/Bauchet Street	19	B	21	C	30	C	22	C	11	YES	1	NO
14	North Broadway	Cesar E. Chavez Avenue	31	C	68	E	27	C	69	E	-4	NO	1	NO
15	North Spring Street/New High Street	Cesar E. Chavez Avenue	45	D	36	D	42	D	35	D	-3	NO	-1	NO
16	North Main Street	Cesar E. Chavez Avenue	17	B	47	D	17	B	38	D	0	NO	-9	NO
17	Alameda Street	Cesar E. Chavez Avenue	37	D	38	D	42	D	45	D	5	YES	7	YES
18	Union Station Driveway	Cesar E. Chavez Avenue	96	F	112	F	83	F	109	F	-13	NO	-3	NO
19	Alameda Street	Los Angeles Street	36	D	31	C	62	E	49	D	26	YES	18	YES
20	North Broadway	Arcadia Street	14	B	16	B	13	B	14	B	-1	NO	-2	NO
21	North Spring Street	Arcadia Street	50	D	25	C	29	C	24	C	-21	NO	-1	NO
22	North Main Street	Arcadia Street	34	C	20	B	19	B	17	B	-15	NO	-3	NO
23	North Los Angeles Street	Arcadia Street	47	D	28	C	33	C	36	D	-14	NO	8	YES
24	Alameda Street	Arcadia Street/US 101 Off-Ramps	112	F	46	D	120+	F	63	E	8+	YES	17	YES
25	Vignes Street	Ramirez Street/Patsaouras Transit Plaza/US 101 Off-Ramps	46	D	88	F	43	D	67	E	-3	NO	-21	NO
26	North Broadway	Aliso Street/US 101 Off-Ramps	11	B	54	D	11	B	40	D	0	NO	-14	NO
27	North Spring Street	Aliso Street	17	B	22	C	12	B	17	B	-5	NO	-5	NO
28	North Main Street	Aliso Street	14	B	51	D	14	B	42	D	0	NO	-9	NO
29	North Los Angeles Street	Aliso Street	19	B	52	D	18	B	77	E	-1	NO	25	YES
30	Alameda Street	Aliso Street/Commercial Street	80	E	63	E	83	F	45	D	3	YES	-18	NO
31	Garey Street/US 101 Off-Ramps	Commercial Street	24	C	32	C	23	C	30	C	-1	NO	-2	NO
32	North Broadway	Temple Street	13	B	69	E	14	B	83	F	1	NO	14	YES
33	North Spring Street	Temple Street	30	C	44	D	23	C	53	D	-7	NO	9	YES
34	North Main Street	Temple Street	25	C	120+	F	24	C	120+	F	-1	NO	0	YES
35	North Los Angeles Street	Temple Street	31	C	60	E	29	C	108	F	-2	NO	48	YES
36	Judge John Aiso Street	Temple Street	15	B	21	C	13	B	57	E	-2	NO	36	YES
37	Alameda Street	Temple Street	72	E	41	D	67	E	37	D	-5	NO	-4	NO
38	Los Angeles Street	1st Street	16	B	85	F	16	B	120+	F	0	NO	35+	YES
39	San Pedro Street	1st Street	18	B	29	C	16	B	27	C	-2	NO	-2	NO
40	Central Ave	1st Street	14	B	37	D	14	B	34	C	0	NO	-3	NO
41	Alameda Street	1st Street	58	E	20	C	51	D	21	C	-7	NO	1	NO

SOURCE: Fehr & Peers, 2017.

Freeway Analysis

A freeway ramp queuing analysis was conducted at six freeway ramp locations to determine future queuing conditions at the off-ramps as a result of changes in travel patterns from the proposed project. Because the project will not generate trips, no material effects to the freeway mainline are anticipated as a result of the project. Off-ramp queue lengths were estimated using the simulation model described in prior sections. Each intersection was configured according to its existing signal timing and physical geometry.

The focus of the queuing analysis is to specifically determine if there is adequate storage capacity at the off-ramps. Queue lengths were measured from the stop bar at the end of the ramp to the painted gore point, where the off-ramp diverges from the freeway using the simulation model. Both average and maximum queue lengths are reported. Both values represent the average for both values across the 10 VISSIM model runs. Vehicle queue lengths were rounded to the nearest 25' increment, which represents approximately one vehicle.

The LOS and queuing analysis was conducted for the following off-ramps and their respective ramp termini intersections:

- US-101 Northbound Ramps & Ramirez Street
- US-101 Northbound Ramp/Arcadia Street & Alameda Street
- US-101 Northbound Ramps & North Spring Street
- US-101 Southbound Ramps & North Broadway
- US-101 Southbound Ramps & North Los Angeles Street
- US-101 Southbound Ramps & Commercial Street

These locations represent the ramps with the highest likelihood to experience changes in operations due to the traffic rerouting and arterial signal timing adjustments associated with the project. Because the project will not generate any trips, it is not expected to have any effect on freeway mainline operations, or on any ramps further from the project site.

Table 3.17-13 presents the existing off-ramp queuing relative to ramp storage at the six analyzed off ramps. Under existing conditions, the US-101 Northbound Ramp/Arcadia Street & Alameda Street off-ramp exceeds the AM peak hour maximum queue[6]. No other analyzed off-ramps exceed the ramp storage under existing conditions.

[6] Queues exceeding the ramp gore point cannot be measured because ramp queues merge with freeway mainline congestion. Queue may exceed reported distance

TABLE 3.17-13
EXISTING OFF-RAMP QUEUING

Ramp / Cross Street	Ramp Length (feet)	AM Peak Hour		PM Peak Hour		Exceeds Storage
		Average Queue (feet)	Maximum Queue (feet)	Average Queue (feet)	Maximum Queue (feet)	
US 101 NB Off-Ramp / Ramirez Street	580	25	125	50	150	NO
US 101 NB Off-Ramp / Alameda Street	1,150	525	1,150+[1]	175	500	YES
US 101 NB Off-Ramp / Spring Street	430	0	50	0	50	NO
US 101 SB Off-Ramp / Broadway	480	50	175	75	250	NO
US 101 SB Off-Ramp / Los Angeles Street	470	25	100	50	150	NO
US 101 SB Off-Ramp / Commercial Street	650	50	325	50	200	NO

NOTE: Queues exceeding the ramp gore point cannot be measured because ramp queues merge with freeway mainline congestion. Queue may exceed reported distance.
SOURCE: Fehr & Peers, 2017.

Table 3.17-14 presents the Future without Project (2029) off-ramp queuing relative to ramp storage at the six analyzed off ramps. Under this scenario, the US-101 Northbound Ramp/Arcadia Street & Alameda Street continues to exceed ramp storage under the AM peak hour maximum queue, but the PM peak hour maximum queue also is expected to exceed ramp storage. No other analyzed off-ramps exceed the ramp storage under the Future without Project (2029) scenario. Off-ramp queues that exceed ramp storage length into the mainline could create safety hazards due to potential conflicts between stationary vehicles waiting to exit and moving vehicles on the mainline. However, the US 101 northbound mainline is characterized by congested conditions and slow speeds, which lessens the speed differential between the mainline and the off-ramp.

TABLE 3.17-14
FUTURE WITHOUT PROJECT (2029) OFF-RAMP QUEUING

Ramp / Cross Street	Ramp Length (feet)	AM Peak Hour		PM Peak Hour		Exceeds Storage
		Average Queue (feet)	Maximum Queue (feet)	Average Queue (feet)	Maximum Queue (feet)	
US 101 NB Off-Ramp / Ramirez Street	580	25	125	50	175	NO
US 101 NB Off-Ramp / Alameda Street	1,150	750	1,150+[1]	575	1,150+[1]	YES
US 101 NB Off-Ramp / Spring Street	430	0	50	0	50	NO
US 101 SB Off-Ramp / Broadway	480	50	200	75	300	NO
US 101 SB Off-Ramp / Los Angeles Street	470	25	100	50	150	NO
US 101 SB Off-Ramp / Commercial Street	650	75	300	50	250	NO

NOTE: 1. Queues exceeding the ramp gore point cannot be measured because ramp queues merge with freeway mainline congestion. Queue may exceed reported distance.
SOURCE: Fehr & Peers, 2017.

Table 3.17-15 presents the Future with Project (2029) off-ramp queuing relative to ramp storage at the six analyzed off ramps with the project-related arterial roadway network changes and traffic rerouting as described in previous sections. Under the Future with Project (2029) scenario, the US-101 Northbound Ramp/Arcadia Street & Alameda Street continues to exceed ramp storage under the AM and PM peak hour. No other analyzed off-ramps exceed the ramp storage under this scenario.

TABLE 3.17-15
FUTURE WITH PROJECT (2029) OFF-RAMP QUEUING

Ramp / Cross Street	Ramp Length (feet)	AM Peak Hour		PM Peak Hour		Exceeds Storage
		Average Queue (feet)	Maximum Queue (feet)	Average Queue (feet)	Maximum Queue (feet)	
US 101 NB Off-Ramp / Ramirez Street	580	25	125	50	200	NO
US 101 NB Off-Ramp / Alameda Street	1,150	1,150+[1]	1,150+[1]	700	1,150+[1]	YES
US 101 NB Off-Ramp / Spring Street	430	0	50	0	50	NO
US 101 SB Off-Ramp / Broadway	480	50	175	75	250	NO
US 101 SB Off-Ramp / Los Angeles Street	470	25	100	50	250	NO
US 101 SB Off-Ramp / Commercial Street	650	50	300	50	225	NO

NOTE: 1. Queues exceeding the ramp gore point cannot be measured because ramp queues merge with freeway mainline congestion. Queue may exceed reported distance.
SOURCE: Fehr & Peers, 2017.

Impact Analysis

The project is expected to exacerbate an existing ramp queue exceedance in this location. Based on the impact criteria detailed above, this would constitute a significant impact.

Mitigation Measures

Mitigation measures to address off-ramp queue exceedances typically include the following potential strategies:

- Off-ramp widening to provide additional queue storage
- Increase green time for the off-ramp to flush the queue more quickly on to city streets

The impacted off-ramp is physically constrained by the existing bus stop island immediately to the north of the ramp, and by a step grade down to the US-101 southbound lanes south of the ramp. Additionally, widening the off-ramp, which is currently four lanes wide, is considered infeasible because it would be inconsistent with the project's objective to enhance pedestrian and bicycle facilities. Roadway widening to accommodate a fifth off-ramp lane would increase pedestrian crossing distances and exposure to vehicle turning movements. Therefore no feasible physical mitigation is identified to mitigate this impact.

Increasing green time at this location for the off-ramp would worsen arterial intersection impacts on Alameda Street and connecting streets, because it would take green time away from Alameda Street. Due to the closely spaced arterial intersections, this further exacerbation of arterial queuing would worsen overall transportation network performance, and is therefore considered infeasible. Therefore, the significant impact is considered significant and unavoidable.

However, to develop concepts to enhance access to and the performance of freeway ramps, as well as the safety of pedestrian and bicycle crossings at ramps, Metro, in partnership with the City of Los Angeles and Caltrans, intends to pursue the preparation of a Project Study Report (PSR) to identify if there are any feasible improvements to freeway ramp facilities around Union Station.

Pedestrian and Bicycle Paths

Impact Analysis

The project will enhance pedestrian and bicycle facilities in the study area by implementing an enhanced crossing across Alameda Street from the station to El Pueblo that will be raised and highly visible, while providing a dedicated crossing area for both pedestrians and cyclists.

The Alameda Esplanade will provide a wide multi-use path along the station's Alameda frontage to facilitate pedestrian and bicycle circulation.

The project would include the construction of a small transit-serving building located at the northern end of the forecourt serving the existing and future transit patrons that travel to and through LAUS,

pedestrians, and cyclists. Due to the non-destination use of the small transit-serving building, no additional traffic is anticipated to be generated due to the project element on nearby local access roads to LAUS.

These project features will substantially enhance pedestrian and bicycle facilities in the study area, and so will have a positive effect on these modes. Therefore, no significant impact is expected.

Mitigation Measures

No mitigation measures are required.

Mass Transit

Impact Analysis

The project will not affect bus stop locations, or any other transit stop facilities. Transit travel time will be modestly affected by the project on most corridors within the study area, but these effects are not expected to materially affect impact transit schedule adherence or variability beyond typical levels. However, based on the changes in vehicle travel times on Los Angeles Street that were measured in the simulation, transit travel times are expected to increase for bus routes that use Los Angeles Street. Transit travel time changes during the AM peak hour are expected to be minor, but during the PM peak hour, travel times will increase considerably due to queuing as a result of the project. The following routes could potentially be affected:

- Big Blue Bus Rapid 10
- LADOT DASH Downtown B
- LADOT Commuter Express 534
- Metro 442

Mitigation Measures

Reroute transit routes that operate on Los Angeles Street to avoid potential future queueing. Potential options could include rerouting from Los Angeles Street to Alameda Street via Aliso Street (northbound buses) or Arcadia Street (southbound buses). Under the project alternatives detailed in Section 5.6, similar rerouting will be required due to traffic movement changes at the Los Angeles Street & Alameda Street intersection. This rerouting would increase the route distance by approximately 500 feet from existing routing that uses Los Angeles Street, which is expected to have minor effects on transit run time, which could be addressed via periodic transit schedule updates. No bus stop locations would be affected by this rerouting. After mitigation, this impact would be less than significant.

(c) Would the proposed project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No significant impacts are expected to occur based on these criteria.

Impact Analysis

This section presents an analysis of potential impacts on the regional transportation system. This analysis was conducted in accordance with the procedures outlined in *Congestion Management Program for Los Angeles County* (CMP) (Metro, 2010). The CMP requires that, when an environmental impact report is prepared for a project, traffic and transit impact analyses be conducted for select regional facilities based on the quantity of project traffic expected to use those facilities.

Regional Traffic Impact Analysis

The CMP guidelines require that the first issue to be addressed is the determination of the geographic scope of the study area. The criteria for determining the study area for CMP arterial monitoring intersections and for freeway monitoring locations are:

- All CMP arterial monitoring intersections where the proposed project will add 50 or more trips during either the AM or PM peak hours of adjacent street traffic.
- All CMP mainline freeway monitoring locations where the proposed project will add 150 or more trips, in either direction, during either the AM or PM peak hours.

The closest CMP arterial monitoring station to the project site is at Alameda Street & Washington Boulevard located approximately three miles south of the project. Because the project is not expected to generate any trips, no further CMP arterial analysis is required.

Regional access to the project site is provided by US-101 immediately south of the project, I-5 approximately 1.5 miles to the east, and SR-110 approximately one mile to the north and west. The CMP freeway monitoring stations closest to the project site on US-101 is north of Vignes Street, on I-5 is at Stadium Way and on I-10 at the eastern City of Los Angeles limits. Because the project is not expected to generate any trips, no further CMP freeway analysis is required

Regional Transit Impact Analysis

Potential increases in transit person trips generated by a project are typically estimated using the methodology outlined in Appendix D of the 2010 CMP, which recommends estimating the number of transit trips expected to result from a proposed project based on the projected number of vehicle trips and an average vehicle ridership (AVR), and then provides guidance regarding the percentage of person trips assigned to public transit depending on the land use type and the proximity to transit services. As this project will not generate new vehicle trips, under the methodology outlined in the CMP it will also

not generate new transit trips, and so would not have an impact on transit. The project would also not materially affect transit travel time in the study area.

Based on the impact criteria above, the project is not expected to have any significant impacts.

Mitigation Measures

No mitigation measures are required.

(d) Would the proposed project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No significant impacts are expected to occur based on these criteria.

Impact Analysis

The project will have no effect on air traffic patterns.

Mitigation Measures

No mitigation measures are required.

(e) Would the proposed project substantially increase hazards to a design feature or incompatible uses?

No significant impacts are expected to occur based on these criteria.

Impact Analysis

The project will enhance safety by widening sidewalks to accommodate pedestrians and cyclists, narrow pedestrian crossings, improving pedestrian and cyclist visibility in a high-visibility raised crosswalk, and will slow vehicle travel speeds via the lane repurposing on Alameda Street. Therefore, the project will enhance safety as a result of the project's design features.

Mitigation Measures

No mitigation measures are required.

(f) Would the proposed project result in inadequate emergency access?

No significant impacts are expected to occur based on these criteria.

Impact Analysis

The project will retain access to the station on Alameda Street, and will not affect any other access locations, so is not expected to impact emergency access to the station site.

The Los Angeles Fire Department (LAFD) in collaboration with LADOT has developed a Fire Preemption System (FPS), a system that automatically turns traffic lights to green for emergency vehicles traveling on designated streets in the City. The City of Los Angeles has over 205 miles of routes equipped with FPS.

While the project would impact intersection level of service in the study area, there is not a direct relationship between predicted travel delay and response times as California state law does require drivers to yield the right-of-way to emergency vehicles and even permits emergency vehicles to use opposing lane of travel, the center turn lanes, or bus-only lanes. Emergency responders also routinely use the center left-turn lanes, or even travel in opposing travel lanes if needed. Generally, multi-lane roadways allow the emergency vehicles to travel at higher speeds and permit other traffic to maneuver out of the path of the emergency vehicle.

Mitigation Measures

No mitigation measures are required.

(g) Would the proposed project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No significant impacts are expected to occur based on these criteria.

Impact Analysis

The proposed project is consistent with the Mobility Plan 2035 network, the ConnectUS Action Plan, and other non-adopted but relevant plans, like the USMP. The proposed project will substantially enhance the safety and capacity of bicycle and pedestrian facilities around the station, and is therefore expected to have a positive impact on these facilities. The existing buffered bike lane on southbound Los Angeles Street would be retained, and a bicycle crossing would be added to provide direct bike access from the station to that facility.

Mitigation Measures

No mitigation measures are required.

3.17.7 Mitigation Measures

The proposed project would result in significant impacts to transportation and traffic in relation to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit. Specifically, significant impacts would occur to intersections and freeway ramps.

No feasible mitigation measures have been identified.

For intersections, signal timing modifications could partially mitigate project impacts in concert with other operational enhancements. Two alternatives, discussed in Section 4.0, *Alternatives*, would reduce vehicle impacts by eliminating certain movements at the intersection of Los Angeles Street & Alameda Street, and providing signal timing operational enhancements. These alternatives are consistent with project objectives. While the project alternatives would reduce the number of significant traffic impacts, they would not fully reduce all significant impacts. Impacts would remain significant and unavoidable at between 9 and 16 intersections, depending on whether the proposed project or one of the two project alternatives are selected.

For freeway ramps, mitigation measures to address off-ramp queue exceedances typically include the following potential strategies:

- Off-ramp widening to provide additional queue storage
- Increase green time for the off-ramp to flush the queue more quickly on to city streets

The impacted off-ramp is physically constrained by the existing bus stop island immediately to the north of the ramp, and by a step grade down to the US-101 southbound lanes south of the ramp. Additionally, widening the off-ramp, which is currently four lanes wide, is considered infeasible because it would be inconsistent with the project's objective to enhance pedestrian and bicycle facilities. Roadway widening to accommodate a fifth off-ramp lane would increase pedestrian crossing distances and exposure to vehicle turning movements. Therefore, no feasible physical mitigation is identified to mitigate this impact.

Increasing green time at this location for the off-ramp would worsen arterial intersection impacts on Alameda Street and connecting streets, because it would take green time away from Alameda Street. Due to the closely spaced arterial intersections, this further exacerbation of arterial queuing would worsen overall transportation network performance, and is therefore considered infeasible. Therefore, the significant impact is considered significant and unavoidable.

However, to develop concepts to enhance access to and the performance of freeway ramps, as well as the safety of pedestrian and bicycle crossings at ramps Metro, in partnership with the City of Los Angeles and Caltrans, intends to pursue the preparation of a PSR to identify if there are any feasible improvements to freeway ramp facilities around Union Station. The proposed project would not result in significant impacts to transportation and traffic in relation to resulting in a substantial disruption to traffic during construction; conflicting with an applicable congestion management program; resulting in a change in air traffic patterns; substantially increasing hazards due to a design feature or incompatible uses; resulting in inadequate emergency access; or conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. No mitigation would be required.

3.17.8 Level of Significance after Mitigation

Impacts to transportation and traffic would be significant and unavoidable in relation to conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit.

Impacts to transportation and traffic would be less than significant in relation to resulting in a substantial disruption to traffic during construction; conflicting with an applicable congestion management program; resulting in a change in air traffic patterns; substantially increasing hazards due to a design feature or incompatible uses; resulting in inadequate emergency access; or conflicting with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities.

3.18 Utilities and Service Systems

This section of the Environmental Impact Report (EIR) analyzes potential impacts to utilities and service systems from construction, operation, and maintenance of the proposed Forecourt and Esplanade Improvements Project (proposed project). The analysis of utilities and service systems consists of a summary of the regulatory framework that guides the decision-making process, a description of the existing conditions at the proposed project study area, anticipated impacts (direct, indirect, and cumulative), mitigation measures and level of significance after mitigation, and alternatives to the proposed project.

3.18.1 Regulatory Setting

Federal

Federal Clean Water Act, Section 401

The Federal Clean Water Act of 1972 (CWA; 33 U.S. Code [USC] §1251) established the basic structure for regulating discharges of pollutants into the waters of the U.S. and regulating quality standards for surface waters.[1] Under the CWA, the U.S. EPA has implemented pollution control programs such as setting wastewater standards for industries and surface waters. Section 401 of the CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. The U.S. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. Point sources are discrete conveyances, such as pipes or manmade ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters. The provisions of Section 401 of the CWA are enforced through the State Water Resources Control Board (SWRCB) and local RWQCBs. Stormwater outfall during construction, operation, and maintenance of this project is subject to the regulatory authority of the Los Angeles RWQCB, County of Los Angeles Department of Public Works, and the City of Los Angeles Bureau of Engineering.

Safe Drinking Water Act (SDWA)

The SDWA (Public Law 93–523) regulates the quality of drinking water in the United States. The law requires actions to protect drinking water and its sources—rivers, lakes, reservoirs, springs, and groundwater wells—and applies to public water systems serving 25 or more people. It authorizes the U.S. EPA to set national health-based standards for drinking water to protect against both naturally

[1] California Water Boards. Accessed 14 September 2015. Fact Sheet: *Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy)*. Available at: http://www.waterboards.ca.gov/water_issues/programs/owts/index.shtml

occurring and man-made contaminants. In addition, it oversees the states, municipalities, and water suppliers that implement the standards.

U.S. EPA standards are developed as a Maximum Contaminant Level (MCL) for each chemical or microbe. The MCL is the concentration that is not anticipated to produce adverse health effects after a lifetime of exposure, based upon toxicity data and risk assessment principles. The U.S. EPA's goal in setting MCLs is to assure that even small violations for a period of time do not pose significant risk to the public's health over the long run. National Primary Drinking Water Regulations (NPDWRs, or primary standards) are legally enforceable standards that limit the levels of contaminants in drinking water supplied by public water systems.

Secondary standards are nonenforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. The U.S. EPA recommends secondary standards to water systems but does not require systems to comply. However, states may choose to adopt them as enforceable standards.

In July 2014, implementation of the SDWA was transferred from the California Department of Public Health (DPH) to State Water Resources Control Board, Division of Drinking Water (DDW). DDW also now oversees the operational permitting and regulatory oversight of public water systems. DDW requires public water systems to perform routine monitoring for regulated contaminants that may be present in their drinking water supply. To meet water quality standards and comply with regulations, a water system with a contaminant exceeding an MCL must notify the public and remove the source from service or initiate a process and schedule to install treatment for removing the contaminant. Health violations occur when the contaminant amount exceeds the MCL or when water is not treated properly. In California, compliance is usually determined at the wellhead or the surface water intake. Monitoring violations involve failure to conduct or to report in a timely fashion the results of required monitoring.

In addition, DDW conducts water source assessments, oversees water recycling projects, permits water treatment devices, certifies water system employees, promotes water system security, and administers grants under the State Revolving Fund and State bonds for water system improvements.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) gives EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

State

SB X7-6, Groundwater

Passed into law in November, 2009, SB X7-6, Groundwater (Section 12924 of the Water Code) required statewide collection and publication of groundwater elevations for the first time in California's history.

SB X7-6 directs local agencies, with the assistance of DWR, to monitor and report the elevation of their groundwater basins to help manage the resource better during both average water years and drought conditions. As of December 2, 2013, DWR received monitoring notifications for more than 395 basins and subbasins. DWR has designated 124 monitoring entities who are now monitoring and reporting groundwater elevations for 152 basins and subbasins.[2]

Solid Waste: Diversion Rule (AB 341)

Under commercial recycling law (Chapter 476, Statutes of 2011), Assembly Bill (AB) 341 directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning October 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. AB 341 declared a policy goal of the state that no less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020.

California Water Action Plan

The California Water Action Plan—released by Governor Brown in January 2014—is a roadmap for the first five years, 2014 to 2019, of the state's journey toward sustainable water management. The California Water Action Plan has been developed to meet three broad objectives: more reliable water supplies, the restoration of important species and habitat, and a more resilient, sustainably managed water resources system (water supply, water quality, flood protection, and environment) that can better withstand inevitable and unforeseen pressures in the coming decades.

The California Water Plan, last updated in 2013, provides a collaborative planning framework for elected officials, agencies, tribes, water and resource managers, businesses, academia, stakeholders, and the public to develop findings and recommendations and make informed decisions for California's water future. The plan, updated every five years, presents the status and trends of California's water-dependent natural resources; water supplies; and agricultural, urban, and environmental water demands for a range of plausible future scenarios. The California Water Plan also evaluates different combinations of regional and statewide resource management strategies to reduce water demand, increase water supply, reduce flood risk, improve water quality, and enhance environmental and resource stewardship. The evaluations and assessments performed for the plan help identify effective actions and policies for meeting California's resource management objectives in the near term and for several decades to come.

[2] California Department of Water Resources. Accessed 15 September 2015. *California Water Today, Volume 1 – The Strategic Plan*. Available at: http://www.waterplan.water.ca.gov/docs/cwpu2013/Final/04_Vol1_Ch03_Ca_Water_Today.pdf

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) was enacted to reduce, recycle, and reuse solid waste generated in the state to the maximum extent feasible. Specifically, the act requires city and county jurisdictions to identify an implementation schedule to divert 50 percent of the total waste stream from landfill disposal by the year 2000. The act also requires each city and county to promote source reduction, recycling, and safe disposal or transformation. Cities and counties are required to maintain the 50 percent diversion specified by AB 939 by the year 2000. The City surpassed the state-mandated 50 percent diversion rate and has achieved a landfill diversion rate of 76.4 percent. As part of the City's solid waste management program, a Solid Waste Integrated Resources Plan (SWIRP) has been developed, which proposes an approach for the City to achieve a goal of 90 percent diversion by 2025. [3]

AB 939 further requires each city to conduct a Solid Waste Generation Study and to prepare a Source Reduction and Recycling Element (SRRE) to describe how it would reach the goals. The SRRE contains programs and policies for fulfillment of the goals of the act, include the above-noted diversion goals, and must be updated annually to account for changing market and infrastructure conditions. As projects and programs are implemented, the characteristic of the waste stream, the capacities of the current solid waste disposal facilities, and the operational status of those facilities are upgraded, as appropriate. California cities and counties are required to submit annual reports to the County Integrated Waste Management Board (CIWMB) to update it on their progress toward the AB 939 goals. To date, the implementation of AB 939 has proven to be a successful method of reducing waste in the City. Furthermore, the City's Solid Waste Management Policy Plan (SWMPP) provides additional goals, objectives, and policies for solid waste management in the City. The Framework Element of the City of Los Angeles General Plan also supports AB 939 and its goals by encouraging an integrated solid waste management system that maximizes source reduction and materials recovery and minimizes the amount of waste requiring disposal.[4]

- In its efforts to reach AB 939 goals and conform to the Framework Element, the Bureau of Sanitation prepared a Solid Waste Integrated Resources Plan (SWIRP), which outlines the City's waste management goals to reduce, reuse, recycle, or convert the resources currently going to disposal so as to achieve overall diversion rate of 90 percent or more be the year 2025. [5]

[3] City of Los Angeles Bureau of Sanitation. Zero Waste Progress Report, March, 2013

[4] City of Los Angeles Department of City Planning. Conservation Element of the City of Los Angels General Plan, September, 26, 2001.

[5] City of Los Angeles Bureau of Sanitation. October 2013, Solid Waste Integrated Resources Plan.

California Solid Waste Reuse and Recycling Act

The California Solid Waste Reuse and Recycling Act of 1991 (AB 2176) was enacted to assist local jurisdictions with accomplishing the goals of AB 939. In accordance with AB 2176, any development project that has submitted an application for a building permit must include adequate, accessible areas for the collection and loading of recyclable materials. Furthermore, the areas to be utilized must be adequate in capacity, number, and distribution to serve the proposed project. Moreover, the collection areas are to be located as close to existing exterior refuse collection areas as possible.

California Senate Bill 610 and 221

California SB 610 and SB 221 became effective January 1, 2002, amending Sections 10910–10915 of the State Water Code, and requiring that counties and cities consider the availability of adequate water supplies for certain new large development projects. These statutes require that cities and counties obtain from the local water supplier written verification of sufficient water supply to serve proposed large development projects in their jurisdiction. Pursuant to SB 610, industrial, manufacturing, or processing plant or industrial park projects are required to complete a Water Supply Assessments if one of three thresholds is exceeded:

- More than 40 acres of land
- More than 650,000 square feet of floor area
- Employing more than 1,000 persons

The proposed project does not exceed any of the three thresholds for a Water Supply Assessment.

Regional

Urban Water Management Plans

Under California Water Code Division 6, Part 2.6, Section 10610-10656, the Urban Water Management Planning Act (UWMPA) requires urban water suppliers that supply more than 3,000 acre-feet of water annually, or serve more than 3,000 connections, to submit an Urban Water Management Plan (UWMP). The UWMP is a public document prepared by water suppliers to support their long-term resource planning over a 20-year period and ensure adequate water supplies are available to meet existing and future water demands. The UWMP must be submitted to the DWR every five years, and must demonstrate progress toward reduction in 20 percent per capita urban water consumption by the year 2020, as required in the Water Conservation Bill of 2009, Senate Bill X7-7. The preparation of the plan includes guidebook, workshops, and programming for comprehensive strategies to conserve water.

Local

Water Quality Control Plan for the Los Angeles Region

The RWQCB has prepared a Water Quality Control Plan for the Los Angeles Region (Basin Plan), which encompasses all coastal drainages flowing to the Pacific Ocean between Rincon Point (on the coast of western Ventura County) and the eastern Los Angeles County line, as well as the drainages of five coastal islands (Anacapa, San Nicolas, Santa Barbara, Santa Catalina, and San Clemente). In addition, the Los Angeles region includes all coastal waters within three miles of the continental and island coastlines. As the eastern boundary, formed by the Los Angeles County line, departs somewhat from the hydrologic divide, the Los Angeles and Santa Ana regions share jurisdiction over watersheds along their common border. The first essentially complete Basin Plan, which was established under the requirements of California's 1969 Porter-Cologne Water Quality Control Act (Section 13000 [Water Quality] *et seq*. of the California Water Code), was adopted in 1975 and revised in 1984. The latest version was adopted in 1994.

The Basin Plan assigned beneficial uses to surface and groundwater such as municipal water supply and water-contact recreation to all waters in the basin. It also set water quality objectives, subject to approval by the EPA, intended to protect designated beneficial uses. These objectives apply to specific parameters (numeric objectives) and general characteristics of the water body (narrative objectives). An example of a narrative objective is the requirement that all waters must remain free of toxic substances in concentrations producing detrimental effects upon aquatic organisms. Numeric objectives specify concentrations of pollutants that are not to be exceeded in ambient waters of the basin.

The Los Angeles RWQCB is involved is the regulation of a number of activities that are relevant to the consideration of the proposed project:

- Prepares, monitors compliance with, and enforces Waste Discharge Requirements, including NPDES permits;
- Implements and enforces local stormwater control efforts;
- Enforces water quality laws, regulations, and waste discharge requirements; and
- General Construction Activity Stormwater Discharges
- Stormwater discharges that are composed entirely of runoff from qualifying construction activities may require regulation under the General Construction Activity Storm Water Permit issued by the SWRCB. Construction activities that qualify include clearing, grading, excavation, reconstruction, and dredge-and-fill activities that result in the disturbance of at least one acre and less than five acres of total land area. The evaluation of the Project does not generate the need for compliance with the Construction General Permit. Additionally the proposed project would requires the consideration of a Standard Urban Stormwater Management Plan (SUSMP) as part of compliance with the NPDES General Construction Activity Storm Water Permit to reduce water quality impacts to the maximum extent practicable. A SUSMP is a report that includes one or more site maps, an identification of construction activities that could cause

pollutants to enter the stormwater, and a description of measures or best management practices (BMPs) to control these pollutants to the maximum extent practicable.

Urban Water Management Plan

The proposed project is served by LADWP for water and power. LADWP, the largest municipal water and power utility in the nation, was established more than 100 years ago to deliver reliable, safe water and electricity to 3.8 million residents and businesses in Los Angeles. From 2007 to 2011, LADWP supplied about 197 billion gallons of water annually for the City's 676,000 residential and business services.[6]

Every five years, the LADWP prepares an Urban Water Management Plan (UWMP) to forecast the future water demands and water supplies under average and dry year conditions, identify future water supply projects such as recycled water, provide a summary of water conservation BMPs, and provide a single and multi-dry-year management strategy. The most recent UWMP was adopted in 2015 and serves two purposes: (1) to achieve full compliance with requirements of California Urban Water Management Planning Act and (2) to serve as a master plan for water supply and resources management consistent with the City's goals and policy objectives.

City of Los Angeles Low Impact Development (LID) Ordinance No. 181899

The main purpose of this law is to ensure that development and redevelopment projects mitigate runoff in a manner that captures rainwater at its source, while utilizing natural resources. Project applicants are required to prepare and implement a stormwater mitigation plan when their projects fall into specific categories defined by the Ordinance:

- Single-family hillside residential developments
- Housing developments of 10 or more dwelling units (including single family tract developments)
- Industrial /Commercial developments with one acre or more of impervious surface area
- Automotive service facilities*
- Retail gasoline outlets*
- Restaurants*
- Parking lots of 5,000 square feet or more of surface area or with 25 or more parking spaces
- Projects with 2,500 square feet or more of impervious area that are located in, adjacent to, or draining directly to designated Environmentally Sensitive Areas (ESA)

The LID ordinance expands the existing SUSMP requirements by imposing rainwater LID strategies on projects that require building permits. The ordinance requires construction activities and facility operations of Development and Redevelopment projects to comply with the requirements of the SUSMP, and integral LID practices and standards for stormwater pollution mitigation, and maximize open, green, and pervious space on all Developments and Redevelopments consistent with the City's

[6] Los Angeles Department of Water and Power. Accessed 5 November 2014. Website. *Facts and Figures*.

landscape ordinance and other related requirements in the Development Best Management Practices Handbook. LID shall be inclusive of SUSMP requirements.

The City has established specific LID requirements for projects that will be taken into consideration in the design and development of the project:

1. The site for every Development or Redevelopment shall be designed to manage and capture stormwater runoff, to the maximum extent feasible, in priority order: infiltration, evapotranspiration, capture and use, treated through high removal efficiency biofiltration/biotreatment system of all of the runoff on site. High removal efficiency biofiltration/biotreatment systems shall comply with the standards and requirements of the Development Best Management Practices Handbook. A LID Plan shall be prepared to comply with the following:
    a. Stormwater runoff will be infiltrated, evapotranspired, captured and used, treated through high removal efficiency Best Management Practices, onsite, through stormwater management techniques that comply with the provisions of the Development Best Management Practices Handbook. To the maximum extent feasible, onsite strormwater management techniques must be properly sized, at a minimum, to infiltrate, evapotranspire, store for use, treat through high removal efficiency biofiltration/biotreatment system, without any storm water runoff leaving the Site for at least the volume of water produced by the quality design storm event that results from:
        i. The 85th percentile 24-hour runoff event determined as the maximized capture stormwater volume for the area using a 48 to 72-hour draw down time, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87, (1988); or
        ii. The volume of annual runoff based on unit basin storage water quality volume, to achieve 850 percent or more volume treatment by the method recommended in the California Stormwater Best Management Practices Handbook – Industrial/Commercial, (2003); or
        iii. The volume of runoff produced from a 0.75 inch storm event.
    b. Pollutants shall be prevented from leaving the Site for a water quality design storm event as defined in Paragraph (a) of this Subdivision unless it has been treated through an onsite high removal efficiency biofiltration/biotreatment system.
    c. Hydromodification impacts shall be minimized to natural drainage systems as defined in the MS4 Permit.

2. If partial or complete onsite compliance of any type is technically infeasible, the project Site and LID Plan shall be required to comply with all applicable Standard Urban Stormwater Mitigation Plan (SUSMP) requirements in order to maximize onsite compliance. For the remaining runoff that cannot feasibly be managed onsite, the project shall implement offsite mitigation on public and/or private land within the same sub-watershed out of the following five sub-watersheds:

Upper Los Angeles River, Lower Los Angeles River, Ballona Creek, Santa Monica Bay, and Dominguez Channel. This shall include construction and perpetual maintenance of projects that will achieve at least the same level of runoff retention, infiltration and/or use, and water quality. All City Departments will assist the developer, when and where feasible, in the design, permitting and implementation of LID BMP projects within the public right of way, with a preference for utilizing the public right of way immediately adjacent to the subject development.

3. A Multi-Phased Project may comply with the standards and requirements of this Section for all of its phases by: (a) designing a system acceptable to the Bureau of Sanitation to satisfy these standards and requirements for the entire Site during the first phase, and (b) implementing these standards and requirements for each phase of Development or Redevelopment of the Site during the first phase or prior to commencement of construction of a later phase, to the extent necessary to treat the stormwater from such later phase. For purposes of this Section, "Multi-Phased Project" shall mean any Development or Redevelopment implemented over more than one phase and the Site of a Multi-Phased Project shall include any land and water area designed and used to store, treat or manage stormwater runoff in connection with the Development or Redevelopment, including any tracts, lots, or parcels of real property, whether Developed or not, associated with, functionally connected to, or under common ownership or control with such Development or Redevelopment.
4. The Director shall prepare, maintain, and update, as deemed necessary and appropriate, the Development Best Management Practices Handbook to set LID standards and practices and standards for stormwater pollution mitigation, including urban and stormwater runoff quantity and quality control development principles and technologies for achieving the LID standards. The Development Best Management Practices Handbook shall also include technical feasibility and implementation parameters, alternative compliance for technical infeasibility, as well as other rules, requirements and procedures as the Director deems necessary for implementing the provisions of this Section of the Los Angeles Municipal Code. The Board of Public Works shall adopt the Development Best Management Practices Handbook no later than 90 days after the adoption of this Ordinance by the City Council and the Mayor.
5. The Director of the Bureau of Sanitation shall develop as deemed necessary and appropriate, in cooperation with other City departments and stakeholders, informational bulletins, training manuals and educational materials to assist in the implementation of the LID requirements.
6. The applicant can appeal the Director's determination of compliance with the provisions of this Article to the Board of Public Works within 30 days of the date of the determination.
7. Any Development or Redevelopment that is exempted from LID requirements under section 0 has the option to voluntarily opt in and incorporate into the project the LID requirements set forth herein. In such case, the Best Management Practices plan check fee associated with the project shall be waived and all LID related plan check processes shall be expedited.
8. Any Development or Redevelopment exempted from this Ordinance under section 0 shall comply with all applicable SUSMP requirements.

Alameda District Specific Plan[7]

Phase I and Phase II

1. To reduce erosion, protective measures (e.g., placement of sandbags around basins, construction of a berm to keep runoff from flowing into the construction site, or keeping motor vehicles at a safe distance from the edge of excavation) shall be implemented during construction.
2. Storm water discharges from the site shall meet, at a minimum, all applicable requirements of the State Regional Water Quality Control Board and NPDES permit requirements, and shall comply with implementation of these requirements through responsible City and County of Los Angeles agencies.
3. A Storm Water Pollution Prevention Program (SWPPP) shall be prepared and submitted for review and approval by the Bureau of Engineering, Street Improvement and Storm water Management Division, prior to issuance of a building permit. The SWPPP shall identify pollutants and applicable BMPs to manage runoff quality.
4. A drainage plan shall be developed, subject to the approval of the Bureau of Engineer, as part of the Plan Check process and prior to development of any drainage improvements.

3.18.2 Affected Environment/Existing Conditions

Water

Water Supply

The LADWP is responsible for ensuring that water demand within the City is met and that state and federal water quality standards are achieved. The City historically receives water from five major sources, three of which are purchased from the Metropolitan Water District of Southern California (MWD): (1) the Eastern Sierra Nevada watershed (via the Los Angeles Aqueduct), (2) the Colorado River (via the Colorado River Aqueduct), (3) the Sacramento-San Joaquin Delta (via the State Water Project/California Aqueduct), (4) local groundwater, and (5) recycled water for industrial and irrigation purposes. In addition, the City's successful conservation programs have reduced demand, preserved the water supply, and offset the need for new resources. Figure 3.18.2-1, *Los Angeles Water Supply Sources*, indicates that 53 percent of water supplied to the City is purchased from the MWD, with the remaining 47 percent being supplied by the Los Angeles Aqueduct (35 percent), local groundwater (11 percent), and recycled water (1 percent).

[7] City of Los Angeles Department of City Planning. Effective June 18, 1996. *Alameda District Specific Plan.* A part of the City General Plan. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF

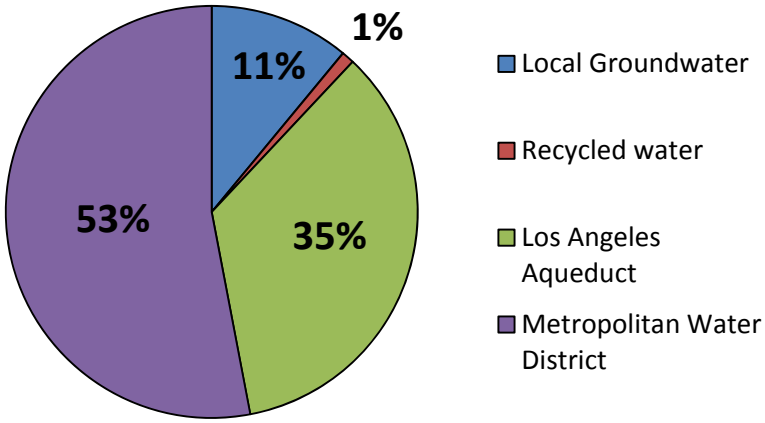


Figure 3.18.2-1
Los Angeles Water Supply Sources
Source: Villaraigosa, Antonio R. May 2008. Securing L.A.'s Water Supply
Prepared by the City of Los Angeles Department of Water and Power.

To serve the residents, businesses, and industries of Los Angeles, the LADWP has more than 7,200 miles of pipelines, 699,600 service connections, 59,346 fire hydrants, over 70 pumping stations, and 110 reservoirs and tanks. From 2007 to 2011, the LADWP supplied about 197 billion gallons of water annually for the City's residential and business services (see Figure 3.10.2-3, *Drainage Map*, in Section 3.10, *Hydrology and Water Quality*).[8]

Groundwater

The City relies heavily upon local groundwater for an average of 11 percent of its total water supply and historically more during emergencies and drought years. The City's water rights pertain to groundwater basins in the San Fernando Valley as well as the Central and West Coast Basins. However, groundwater contamination in the San Fernando Valley, where the majority of the City's groundwater supply is produced, has severely limited water available for pumping. (Figure 3.10.2-2, *Groundwater Map*, in Section 3.10, *Hydrology and Water Quality*).

Wastewater

The Bureau of Sanitation is responsible for operating and maintaining one of the world's largest wastewater collection and treatment systems. Over 6,500 miles of sewers serve more than four million residential and business customers in Los Angeles and 29 contracting cities and agencies. These sewers

[8] Villaraigosa, Antonio R. May 2008. *Securing L.A.'s Water Supply*. Prepared by the City of Los Angeles Department of Water and Power.

are connected to the City's four wastewater and water reclamation plants that process a combined average of 550 million gallons of wastewater each day.

The sewer infrastructure in the vicinity of the proposed project includes an existing16-inch, and an existing 30-inch line along N. Alameda St. Additionally there is a 12-inch line on Arcadia, and a 12-inch line along El Monte Busway (Figure 3.18.2-2, *Sewers*). [9]

The proposed project study area is serviced by the Hyperion Treatment Plant (HTP), located approximately 14 miles to the west of the proposed project site at 12000 Vista Del Mar, Los Angeles, California 90293. HTP is a part of the Hyperion Treatment System, which also includes the Tillman Water Reclamation Plant (TWRP) and the Los Angeles-Glendale Water Reclamation Plant (LAGWRP). The HTP has a design capacity of 450 million gallons per day (mgd) and currently treats an average of 275 mgd to primary and secondary treatment standards, using three levels of filtration treatment before discharging the treated wastewater 5 miles offshore.[10] The remaining capacity of the HTP is, therefore, approximately 175 mgd, or 38.9 percent of its total capacity. Most of the treated effluent from HTP is discharged into the Santa Monica Bay through a 5-mile ocean outfall, while approximately 50 mgd of secondary effluent are recycled on-site or transported to the West Basin Municipal Water District Water Recycling Plant for use by local industries.[11] The discharge of effluent from the HTP into Santa Monica Bay is regulated by permits issued under the CWA's NPDES and is required to meet the RWQCB's requirements for a recreational beneficial use. Accordingly, HTP effluent to Santa Monica Bay is continually monitored to ensure that it meets or exceeds prescribed standards. The Los Angeles County Department of Health Services also monitors flows into the Santa Monica Bay.[12]

The HTP service area encompasses approximately 328,000 acres (515 square miles) of the greater Los Angeles area and serves approximately 4 million people. HTP also serves 53,000 acres outside the jurisdiction of the City on a contract basis. The HTP service area includes approximately 96 percent of the total area served by the City of Los Angeles Department of Public Works Bureau of Sanitation Divisions.

[9] Bureau of Engineering, LA Department of Public Works. Available at: http://navigatela.lacity.org/NavigateLA/

[10] City of Los Angeles Bureau of Sanitation, Major Activities. Accessed December 2013. Website. *Wastewater Collection and Treatment*.

[11] City of Los Angeles Bureau of Sanitation. Accessed August 2017. Website. *About Los Angeles Sewer System*.

[12] City of Los Angeles Bureau of Sanitation, Environmental Monitoring Division. August 2007. *Santa Monica Bay Biennial Assessment Report: 2005-2006*.

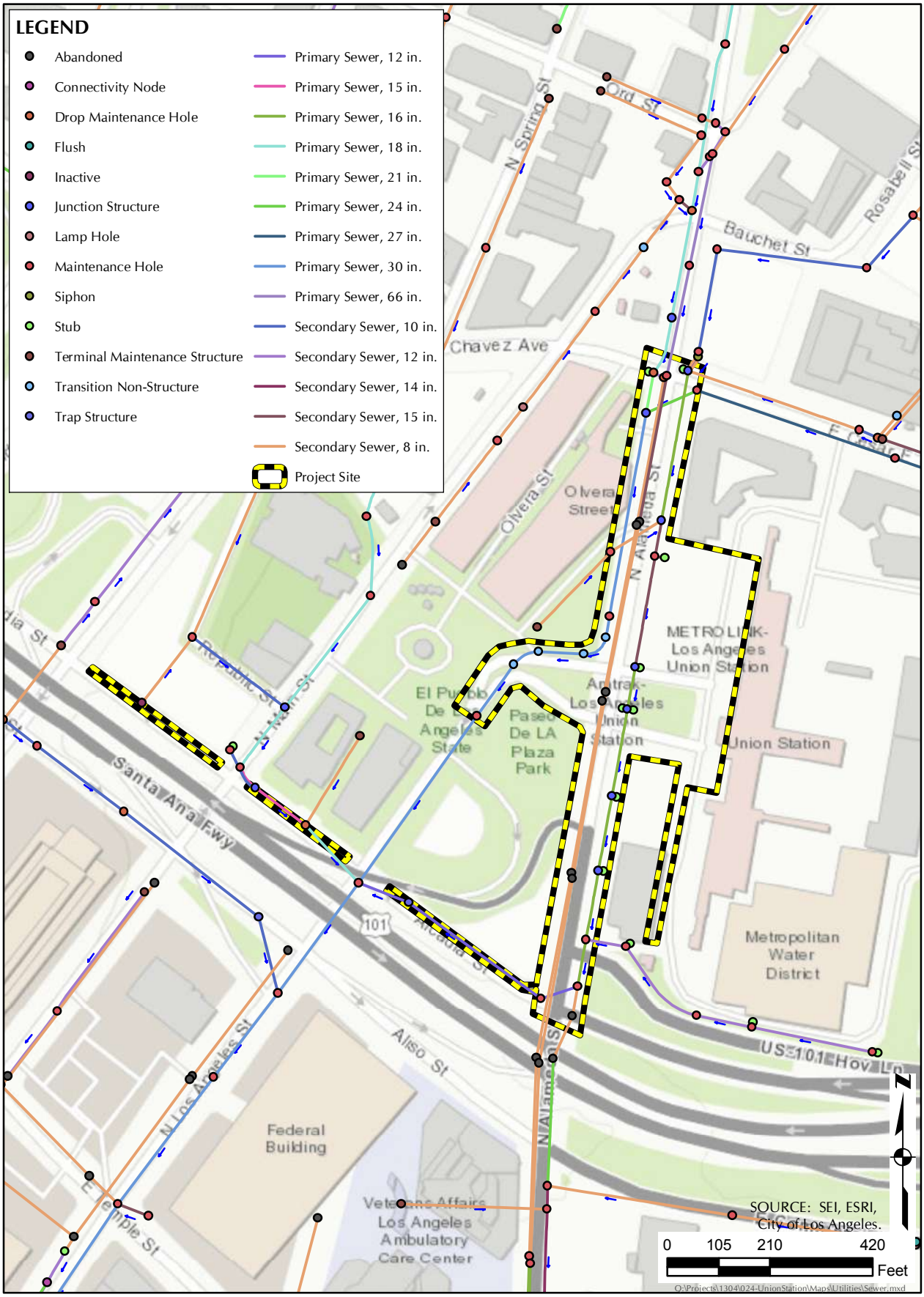


Figure 3.18.2-2. Sewers

Solid Waste

Within the City of Los Angeles, solid waste management, including collection and disposal services and landfill operation, is administered by various public agencies and private companies. Refuse from single-family residential and limited (4 units or less) multi-family residential uses on public streets is collected by the Los Angeles Bureau of Sanitation and disposed of at City-operated landfills. Waste generated by the majority of multi-family residential sources and all commercial and industrial sources is collected by private contractors of their franchise zone. Construction waste is also collected by private contractors. Private contractors can dispose of waste at a City-operated landfill or a landfill of their choosing.

Waste disposal sites (i.e., landfills) are operated by the City and County of Los Angeles, as well as by private companies. In addition, transfer stations are utilized to temporarily store debris until larger haul trucks are available to transport the materials directly to the landfills. Most commonly, the City is serviced by the Sunshine Canyon Landfill and the Chiquita Canyon Landfill. Both landfills accept residential, commercial, and construction waste (Figure 3.18.2-3*, Landfills*). As of 2017, the Sunshine Canyon Landfill has an average daily intake of 7,701 tons of solid waste, 36 percent less than its daily permitted capacity of 12,100 tons of solid waste. At its current rate of disposal, the Sunshine Canyon Landfill is anticipated to be closed in 2037. The Chiquita Canyon Landfill has an average daily intake of 3,446 tons of solid waste, 43 percent less than its daily permitted capacity of 6,000 tons of solid waste. The Chiquita Canyon Landfill was anticipated to close in 2015 (Table 3.18.2-1, *Landfills Capacity and Intake*). However, Waste Connections, the operator of the Chiquita Landfill, proposes to increase the permitted daily disposal from 6,000 to 12,000 tons per day, increase the permitted maximum weekly disposal tonnage from 30,000 to 60,000 tons, increase the disposal footprint laterally from 257 acres to 400 acres, and increase the maximum elevation from 1,430 feet to 1,573 feet. On March 17, 2016, Department of Regional Planning issued a “Clean Hands Waiver” to Waste Connections, Inc, which allows the Landfill to continue its operation while processing the new CUP application. The waiver is intended solely as a stop-gap measure to avoid a temporary shut-down of the landfill. The interim operating authority would be superseded by the new CUP, when and if it is approved by the County. If the new CUP is not approved then the landfill will close. The waiver will terminate either on July 31, 2017, or if it is revoked by the Director of Regional Planning.[13] On April 19, 2017, the County planning commissioners gave Chiquita Canyon Landfill a 30-year extension after a public hearing. [14]

[13] County of Los Angeles Department of Public Works. August 2012. *County of Los Angeles Countywide Integrated Waste Management Plan: 2015 Annual Report*.

[14] The Signal Santa Clarita Valley. 19 April 2017. *Chaquita Canyon Landfill Gets 30 Year Extension*.

TABLE 3.18.2-1
LANDFILL CAPACITY AND INTAKE

Landfill	Daily Permitted Capacity (tons)	Average Daily Intake (tons)	Remaining Permitted Capacity (million tons)	Anticipated Closure Date*
Sunshine Canyon Landfill	12,100	7,701	72.61	2037
Chiquita Canyon Landfill	6,000	3,446	0.76	2047*

NOTE: *Based on current disposal rates. A waiver has been provided and the CUP is currently in process to extend the capacity and closure date.
SOURCE: County of Los Angeles Department of Public Works. August 2015. *County of Los Angeles Countywide Integrated Waste Management Plan: 2015 Annual Report*.

Stormwater

The proposed project is a part the Los Angeles storm drain system. The LACDPW has implemented measures to initiate storm water pollution reduction programs throughout the County.[15] The proposed project is a modification of a previously developed site. The proposed project site is served by stormwater drains that convey stormwater away from the site (Figure 3.18.2-2). Currently, impervious surfaces on the proposed project site consist of buildings and paved areas, which cover the soil and do not allow for stormwater to percolate into the soil. Stormwater, which drains off the impervious surface areas of the site, is conveyed by gutters and catch basins into the system of storm drains surrounding the project site. The County has adopted Stormwater Management Plans (SWMPs) requiring new development to meet the NPDES requirements (including those related to storm drain and water discharge from a project site) through BMPs.

3.18.3 Environmental Impacts/Environmental Consequences

The State CEQA Guidelines recommend the consideration of seven questions when addressing the potential for significant impact to utilities and service systems. Would the proposed project:

(a) Exceed wastewater treatment requirements of the applicable regional water quality control board?

The proposed project would result in no impacts to utilities and service systems in relation to exceeding wastewater treatment requirements of the Los Angeles RWQCB.

[15] County of Los Angeles Department of Public Works. n.d. *Stormwater Pollution Prevention Home*. Available at: http://ladpw.org/PRG/StormWater/Page_03.cfm

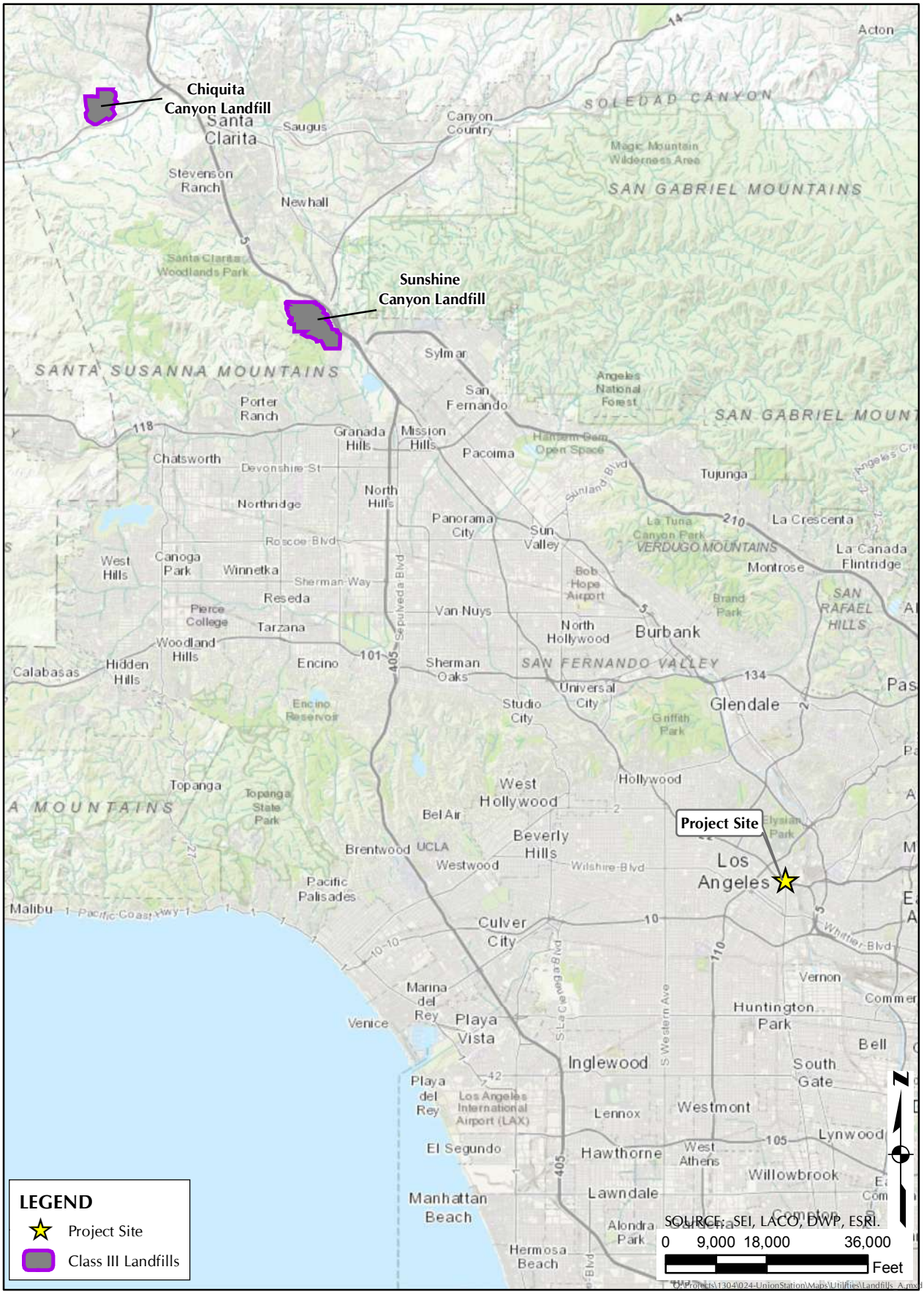


Figure 3.18.2-3. Landfills

The wastewater generated from the proposed project would be from bathrooms shall they be constructed. The wastewater would be serviced by HTP, which is located approximately 14 miles to the west of the proposed project site at 12000 Vista Del Mar, Los Angeles, California 90293. HTP has a design capacity of 450 mgd and currently treats an average of 275 mgd to primary and secondary treatment standards, using three levels of filtration treatment before discharging the treated wastewater 5 miles offshore with significant excess capacity. Most of the effluent from HTP is discharged into the Santa Monica Bay through a 5-mile ocean outfall, while approximately 50 mgd of secondary effluent is recycled on-site or transported to the West Basin Municipal Water District Water Recycling Plant for use by local industries. Further, the makeup and composition of the wastewater would not change that would entail changing wastewater processes at HTP.

The proposed project would not increase population and would not induce population growth and any accompanying wastewater flow increases in the area, either directly or indirectly. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and the transit population. The proposed project would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. The proposed project would result in no indirect impacts in regard to population growth because it is limited to landscape improvements and the creation of public open space and pedestrian and cycling improvements. Although these improvements would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, they are not major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth and accompanying wastewater increases. The proposed project will develop a small transit-serving building, which may include one restroom with a water efficient commercial toilet (1.28 gallons per flush), and a water efficient commercial urinal (0.125 gallons per flush). [16] The proposed restroom is anticipated to generate on average 2,559 gallons per year (gpy) of waste water (commercial efficient toilet: 1,974 gpy; commercial efficient urinal: 585 gpy).[17] The HTP has more than adequate treatment capacity to meet the treatment requirements from the wastewater generated from the proposed restroom in the small transit-serving building. Therefore, the proposed project would not result in significant impacts to utilities and service systems and no further analysis related to exceeding wastewater treatment requirements is warranted.

(b) Require or result in the construction of new water or wastewater treatment facilities, the construction of which could cause significant environmental effects?

The proposed project would result in no impacts to utilities and service systems in relation to the construction of new water or wastewater treatment facilities or expansion of facilities, causing significant environmental effects. The proposed project site would continue to be serviced by existing City water and wastewater utility lines.

[16] California Code of Regulations, Title 20, Public Utilities and Energy.

[17] California Code of Regulations, Title 20, Public Utilities and Energy.

The proposed project would not create the need not induce substantial population growth directly or indirectly and any accompanying requirements for the construction of new water or wastewater treatment facilities. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and the transit population. The proposed project would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. The proposed project would result in no indirect impacts in regard to population growth because it is limited to landscape improvements and the creation of public open space and pedestrian and cycling improvements. Although these improvements would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, they are not major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth and accompanying wastewater increases. Therefore, the proposed project would not result in significant impacts to utilities and service systems and no further analysis related to new water or wastewater treatment requirements is warranted.

The proposed project area will be serviced by HTP, which has a design capacity of 450 mgd and treats an average of 275 mgd. Furthermore, in November 2006, the Los Angeles City Council approved the Integrated Resources Plan (IRP), which accounts for projected needs and sets forth improvements and upgrades to wastewater systems, recycled water systems, and runoff management programs in the City through the year 2020. The IRP addresses increases in wastewater flows through improvements, additions, and expansions within the HTP service area. These improvements would increase the capacity of the HTP service area to 570 mgd, consisting of HTP's capacity of 450 mgd, TWRP's new capacity of 100 mgd, and LAGWRP's capacity of 20 mgd.[18] The City of Los Angeles prepared the One Water LA 2040 Plan (One Water LA), an integrated approach for water supply, wastewater treatment, and stormwater management.[19] One Water LA is a comprehensive planning process designed to increase sustainable water management for the City of Los Angeles. One Water LA's goal is to meet the Mayor's Executive Directive to reduce the City's purchase of imported water by 50 percent by 2024. As of today, all projects have been completed within treatment plants and sewer lines, and additional ongoing improvements have been proposed in order to continually provide services to meet wastewater needs for the City. The proposed project will develop a small transit-serving building, which may include a restroom with a water efficient commercial toilet (1.28 gallons per flush), and a water efficient commercial urinal (0.125 gallons per flush).[20] The proposed project, if developed, would generate on average 2,559 gallons per year (gpy) of waste water (commercial efficient toilet: 1,974 gpy; commercial efficient urinal: 585 gpy).[21] The HTP has more than adequate treatment capacity to handle the

[18] City of Los Angeles Bureau of Sanitation and Department of Water and Power. September 2006. *City of Los Angeles Integrated Resources Plan: Implementation Strategy*. Prepared by CH:CDM.

[19] –City of Los Angeles. 4 May 2015. One Water 2040 Plan Guiding Principles Report.

[20] California Code of Regulations, Title 20, Public Utilities and Energy.

[21] California Code of Regulations, Title 20, Public Utilities and Energy.

wastewater generated from the proposed restroom, in the small transit-serving building, if developed. Therefore, with the increased expansion of the HTP service area and a remaining capacity of approximately 88 mgd at HTP, there would be sufficient treatment capacity, and therefore no impacts to utilities and service systems related to the construction of new water or wastewater treatment facilities or expansion of facilities, causing significant environmental effects.

(c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental impacts?

The proposed project would result in no impacts to utilities and service systems in relation to the construction of new stormwater drainage facilities or expansion of existing facilities, which could cause significant environmental impacts.

As currently designed, about 170,000 square feet of impervious surface will be replaced with hardscape and landscape improvements. The RWQCB regulates runoff during clearing, grading, and excavation activities that may result in soil disturbance of any construction site of at least 1 acre of total land area. Additionally the City LID Ordinance further regulates Development or Redevelopment that creates, adds or replaces 500 square feet or more of impervious area. The total project site encompasses approximately 6.71 acres, and therefore, construction activities would be subject to the requirements of a NPDES Permit issued by the RWQCB. Metro will consult with the City regarding the design, construction, and operation of facilities that affect net impervious surface in relation to the City LID requirements, outlined in the LID Ordinance.

The NPDES General Construction Permit requires that all developers of land where construction activities will occur over more than 1 acre (1) develop and implement a SWPPP, which specifies BMPs that will reduce pollution in stormwater discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards and (2) eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation. The SWPPP typically includes minimization of erosion during construction, stabilization of construction areas, sediment control, control of pollutants from construction materials, as well as post-construction stormwater management (e.g., the minimization of impervious surfaces, treatment of stormwater runoff, etc.). The SWPPP also must include a discussion of the program to inspect and maintain all BMPs. The City of Los Angeles Development Best Management Practices Handbook, Part A, Construction Activities, Second Edition, contains specific minimum BMP requirements for all construction activities. During project operation, a SUSMP and LID Plan would be implemented.

The SUSMP shall contain post-construction BMPs to support the operation and maintenance of the project elements. In the development of the SUSMP, Metro will evaluate the City of Los Angeles Development Best Management Practices Handbook, Part B Planning Activities. The SUSMP requires project proponents to mitigate (infiltrate or treat) the stormwater runoff (volume or flow rate) generated from 0.75 inch of rainfall over 24 hours.

A SWPPP shall be developed to support the construction of each element of the proposed project, in a manner that meets the requirements for issuance of a NPDES permit. The SWPPP shall contain BMPs that are routinely used by Metro and its contractors on construction efforts throughout the City and County. The appropriate BMPs shall be designed to reduce the potential pollutants of concern in the project's surface water runoff. The project's SUSMP, inclusive of LID BMPs, would be reviewed and revised over time to ensure that BMPs are functioning properly and are effective at treating runoff from the site throughout the life of the project. The project would also incorporate BMPs that would detain surface water runoff as well as treating these waters, either actively or passively, before discharging these waters to the local storm drain system. Through the incorporation of the requisite BMPs, development of the project is anticipated to improve the quality of the water discharged from the site, compared to existing conditions. Compliance with the requirements of the NPDES Permit and the SUSMP would ensure that the construction or operation of the project would not violate any water quality or waste discharge requirements.

Therefore, the proposed project would not result in significant impacts to utilities and service systems, and no further analysis related to the construction of new stormwater drainage facilities or expansion of existing facilities, which could cause significant environmental impacts, is warranted.

(d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

LADWP is committed to providing a highly reliable water supply by implementing cost-effective conservation, recycled water, and stormwater capture programs, and ultimately meeting the required future targets for water demand. [22] The proposed project would result in no impact in regards to having sufficient water supplies to serve the project from existing entitlements and resources, or in regards to new expanded entitlements being needed. The proposed project would not require the LADWP to acquire new water entitlements and result in no impacts. The proposed project would not induce substantial population growth directly or indirectly that would result in not result in an increase in water demand. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and the transit population. The proposed project would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. The proposed project would result in no indirect impacts in regard to population growth because it is limited to landscape improvements and the creation of public open space and pedestrian and cycling improvements. Although these improvements would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, they are not major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth and

[22] LADWP Water Management Plan. 2015. Available at: https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=QOELLADWP005416&RevisionSelectionMethod=LatestReleased

accompanying need for large quantities of water. Therefore, the proposed project would not result in the need for new water entitlements.

(e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The proposed project would result in no impacts to wastewater treatment capacity. The proposed project would not induce substantial population growth directly or indirectly that would result in an increase in solid waste. The proposed project would include a small transit-serving building, which may include a restroom with a water efficient commercial toilet (1.28 gallons per flush), and a water efficient commercial urinal (0.125 gallons per flush). [23] The proposed restroom, if developed, would generate on average 2,559 gallons per year (gpy) of waste water (commercial efficient toilet: 1,974 gpy; commercial efficient urinal: 585 gpy).[24] The HTP has more than adequate treatment capacity to handle the wastewater generated from the proposed restroom in the small transit-serving building, if developed. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and the transit population. The proposed project would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. The proposed project would result in no indirect impacts in regard to population growth because it is limited to landscape improvements and the creation of public open space and pedestrian and cycling improvements. Although these improvements would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, they are not major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth and the accompanying need for additional solid waste handling. Therefore, the proposed project would not overcome the capacity limits of the Hyperion Treatment Plant.

(f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

The proposed project would result in no impacts to the Bureau of Sanitation landfill capacity. The proposed project would not induce substantial population growth directly or indirectly that would result in an increase in solid waste. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and the transit population. The proposed project would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. The proposed project would result in no indirect impacts in regard to population growth because it is limited to landscape improvements and the creation of public open space and pedestrian and cycling improvements. Although these improvements would improve the convenience of

[23] California Code of Regulations, Title 20, Public Utilities and Energy.

[24] California Code of Regulations, Title 20, Public Utilities and Energy.

accessing transit facilities at Los Angeles Union Station from the project vicinity, they are not major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth and the accompanying need for additional solid waste handling. Therefore, the proposed project would not overcome the permit limits for the existing Bureau of Sanitation's Sunshine Canyon and Chiquita Canyon landfills.

(g) Comply with Federal, State, and Local statutes and regulations related to solid waste?

The proposed project would result in no impacts related to solid waste in relation to compliance with applicable federal, state, and local statues and regulations pertaining to solid waste. The proposed project would not increase population thus leading to an increase in solid waste, nor would it increase solid waste, or how solid waste is currently disposed of or handled. Consistent with the provisions of AB 341, each element of the project shall provide for trash and recycling bins for use by the public. All waste will be managed on a daily basis and deposited at the existing LAUS waste disposal and recycling pick-up area located near the back entrance of the Amtrak Bus Plaza. As population is not expected to increase as a result of the project, no modifications would need to be made to current solid waste disposal practices or municipal solid waste landfills.

The composition of solid waste from the project area would be representative of the existing composition during and after construction. The proposed project is intended to serve existing and anticipated residents, workers, visitors, and the transit population. The proposed project would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses that would result in substantial increases in waste generation. The proposed project would result in no indirect impacts in regard to population growth because it is limited to landscape improvements and the creation of public open space and pedestrian and cycling improvements. Although these improvements would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, they are not major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth and alter the composition of the solid waste.

3.18.4 Cumulative Impacts

The potential for cumulative impacts was evaluated in relation to each of the seven questions in the State CEQA Guidelines for utilities and service systems that were considered for the proposed project. The proposed project would result in no impact to utilities and service systems; therefore, there would be no contribution to cumulative impacts to utilities and service systems in the region. As there would be no direct, indirect, or cumulative impacts on utilities and service systems, no mitigation is required.

3.18.5 Mitigation Measures

No mitigation would be required.

3.18.6 Level of Significance after Mitigation

There would be no significant impacts to utilities and service systems.

CHAPTER 4
ALTERNATIVES

CEQA requires that an EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly avoid or lessen any significant environmental impacts while substantially attaining the basic objectives of the project. An EIR should also evaluate the comparative merits of the alternatives. This chapter describes potential alternatives to the proposed project that have been carried forward for analysis in comparison to the potential environmental impacts associated with the proposed project.

4.1 Alternatives Considered

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision-making. In accordance with CEQA Guidelines Section 15126.6, the EIR analyzes Alternative 1: No Project Alternative, Alternative 2: Full Closure of Los Angeles Street, and Alternative 3: Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure). An EIR need not consider an alternative with effects that cannot be reasonably ascertained, when implementation is remote and speculative, and if its selection would not achieve the basic project objectives.

4.1.1 No Project

The "no project" alternative analysis discusses the existing conditions at the time of publication of the Notice of Preparation on December 22, 2016, projected forward to the 2029 planning horizon if the project were not approved, based on current plans and consistent with available infrastructure and community services.

For this project, the "no project" alternative will leave the current conditions in place: Alameda Street with three traffic lanes in each direction; the current entrance and exit driveways from Union Station with passenger drop off at the curb in front of the building; two crosswalks across Alameda Street that connect Union Station to El Pueblo on both sides of Los Angeles Street; no changes to Los Angeles Street; no changes to the surface parking lot; and no bus parking along Arcadia Street.

4.1.2 Full Closure of Los Angeles Street

The Full Closure of Los Angeles Street alternative would include many of the elements described in the project description with the exception of the partial closure of Los Angeles Street (Figure 4.1.2-1, *Alternative 2 Plan*). Instead of the partial closure as described, this alternative would have the complete closure from Alameda Street to the existing mid-block crosswalk across Los Angeles Street. Northbound access on Los Angeles Street would be retained from Arcadia Street to the US 101 Northbound On-Ramp. With the complete closure, there would be a continuous pedestrian connection between Father Serra Park and El Pueblo, and a continuous sidewalk would be provided adjacent to Alameda Street. The full closure also provides the potential for a wider crossing area for pedestrians and bicyclists. The

Forecourt changes would remain as proposed in the project description. This alternative would change traffic patterns because a connection between Los Angeles Street and Alameda Street would be removed. On Arcadia Street, the tour bus parking lane would be provided during off-peak hours only, with the lane being used by through-traffic during peak hours.

4.1.3 Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure)

The Restricted Left Hand Turns from Los Angeles alternative would include many of the elements described in the project description but would not allow left hand turns onto Alameda Street from Los Angeles Street (Figure 4.1.3-1, *Alternative 3 Plan*). This would mean that only right hand turns (southbound) would be allowed onto Alameda Street, as well as through movements into Union Station. Vehicles could also travel through into the LAUS driveway from Los Angeles Street. This alternative would change the traffic and pedestrian circulation on and crossing Alameda Street. This alternative would also keep the Forecourt improvements as described in the project description. This alternative would change traffic patterns because the eastbound left movement from northbound Los Angeles Street to northbound Alameda Street would be prohibited. On Arcadia Street, the tour bus parking lane would be provided during off-peak hours only, with the lane being used by through-traffic during peak hours.

4.1.4 Ability of Alternatives to Meet Project Objectives

As stated in Chapter 2, *Project Description*, the Los Angeles Metropolitan Transportation Authority (Metro) anticipates increased visitors and transit riders utilizing LAUS as the population grows and there is a desire to utilize alternate forms of transit than automobiles. The need for the project is to better serve destination and through traffic at LAUS. The goal of the proposed project is to enhance connectivity to LAUS by creating a more welcoming experience to transit riders and visitors. Metro has identified objectives that are important considerations in achieving the overall goal of connectivity for riders, visitors, and the surrounding community.

The effectiveness of each of the alternatives to achieve the basic objectives of the proposed project has been evaluated in relation to the statement of objectives described in Chapter 2, *Project Description*. A summary of the ability of the proposed project and alternatives under consideration to meet the objectives of the proposed project is presented in Table 4.1.4-1, *Summary of Ability of Proposed Project and Alternatives to Attain Project Objectives*. The proposed project, along with Alternatives 2 and 3, would meet all of Metro's basic objectives. Although Alternative 1, the No Project Alternative, is not capable of meeting any of the basic objectives, it has been analyzed, as required by CEQA.

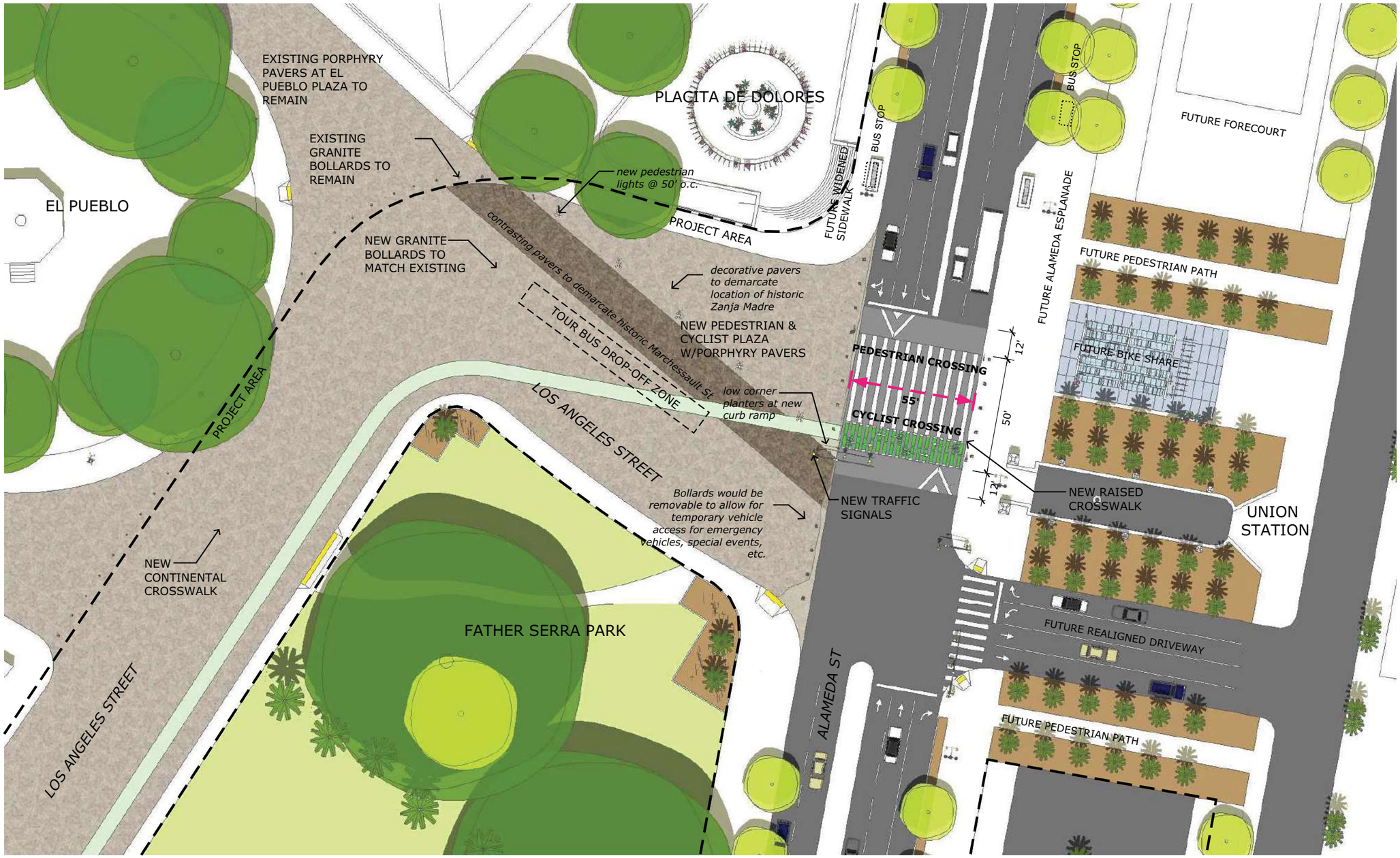


Figure 4.1.2-1. Alternative 2 Plan

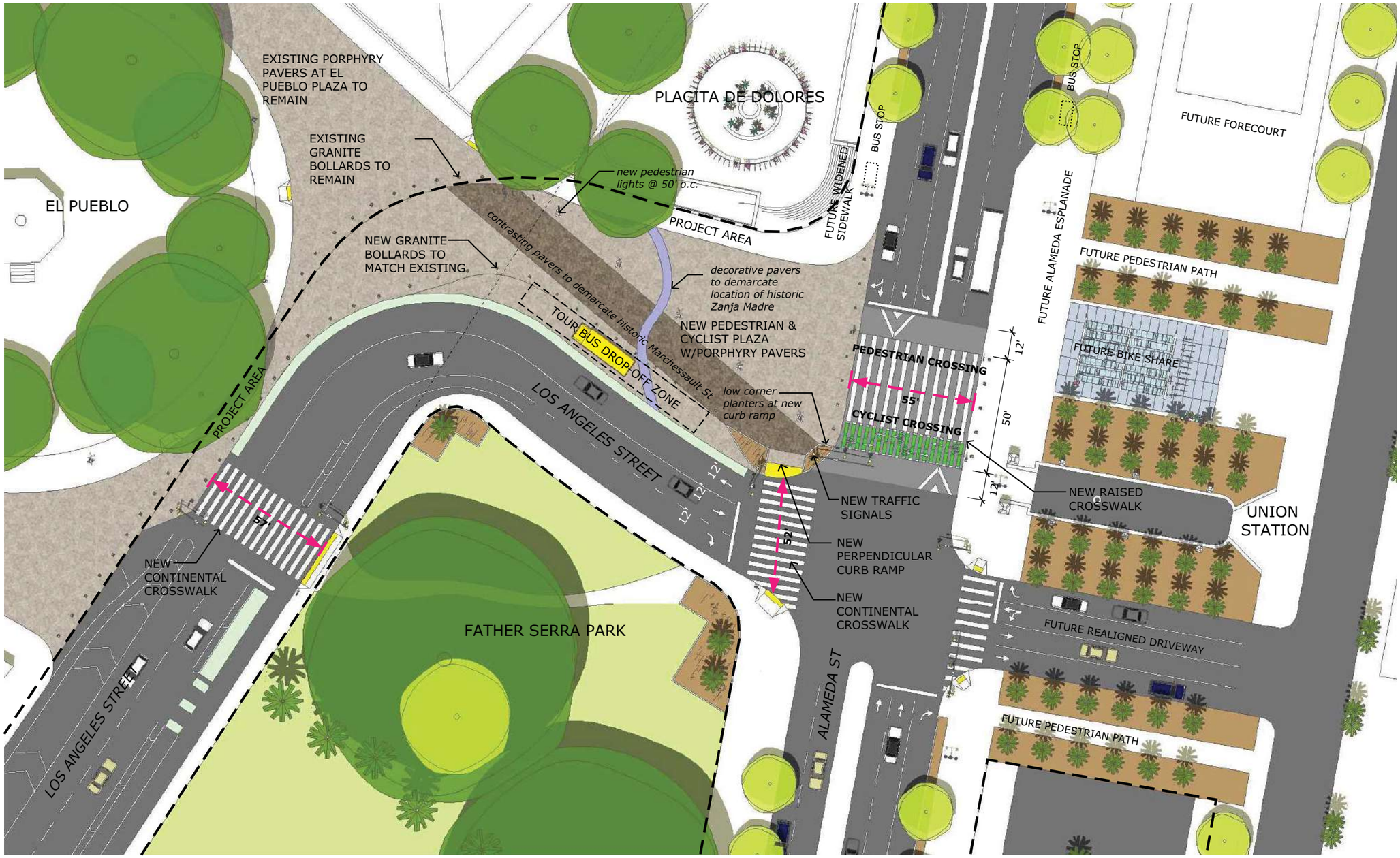


Figure 4.1.3-1. Alternative 3 Plan

TABLE 4.1.4-1
SUMMARY OF ABILITY OF PROPOSED INITIATIVE AND ALTERNATIVES TO ATTAIN PROJECT OBJECTIVES

Objective	Proposed Project	Alternative 1: No Project Alternative	Alternative 2: Full Closure of Los Angeles Street	Alternative 3: Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure)
1. Protect and enhance Los Angeles Union Station as a national historic resource by advancing clear site lines and view sheds to the station.	Yes	No	Yes	Yes
2. Prioritize connectivity, convenience, and safety for the most vulnerable users (pedestrians, bicyclists, transit patrons, and community stakeholders) to safely navigate to and from the project site.	Yes	No	Yes	Yes
3. Advance desirable and accessible public space at the LAUS forecourt that creates a visually porous and permeable connection between Union Station and the surrounding historic and cultural communities.	Yes	No	Yes	Yes
4. Facilitate alternatives to driving by providing infrastructures that enable more walking and bicycling consistent with the objectives of the Climate Action and Adaptation Plan.	Yes	No	Yes	Yes
5. Enhance the safety and quality of pedestrian and bicycle connections between the station and El pueblo historic Monument, Father Serra Park, Olvera Street, and nearby business and neighborhood consistent with identified strategies in the Southern California Association of Governments 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy.	Yes	No	Yes	Yes
6. Advance sustainability by providing for reduced consumptive water use in a cost effective manner consistent with provisions of Metro's Water Action Plan and improving multi-modal facilities that encourage active transportation and reduction in vehicle miles traveled.	Yes	No	Yes	Yes
7. Advance comprehensive planning for Los Angeles Union Station that leverages it as the major regional transportation hub, a destination, and one of the city's foremost landmarks.	Yes	No	Yes	Yes

4.1.5 Alternatives Considered but Not Carried Forward

During the public scoping process, comments were received regarding parking, landscaping, pedestrian and bicycle circulation, connectivity, outreach process, Father Serra Park, traffic, historic preservation,

emergency access, and other nearby facilities. Multiple comments addressed development of a bicycle path on Los Angeles Street. The proposed project and its alternatives include the existing buffered bicycle lane on Los Angeles Street within the project boundaries, so this alternative was not analyzed further. A Pedestrian Bridge Alternative was considered as well to improve traffic flow, but it was not carried forward for detailed analysis because it did not meet project objectives 1, 2, and 5.

Pedestrian Bridge Alternative

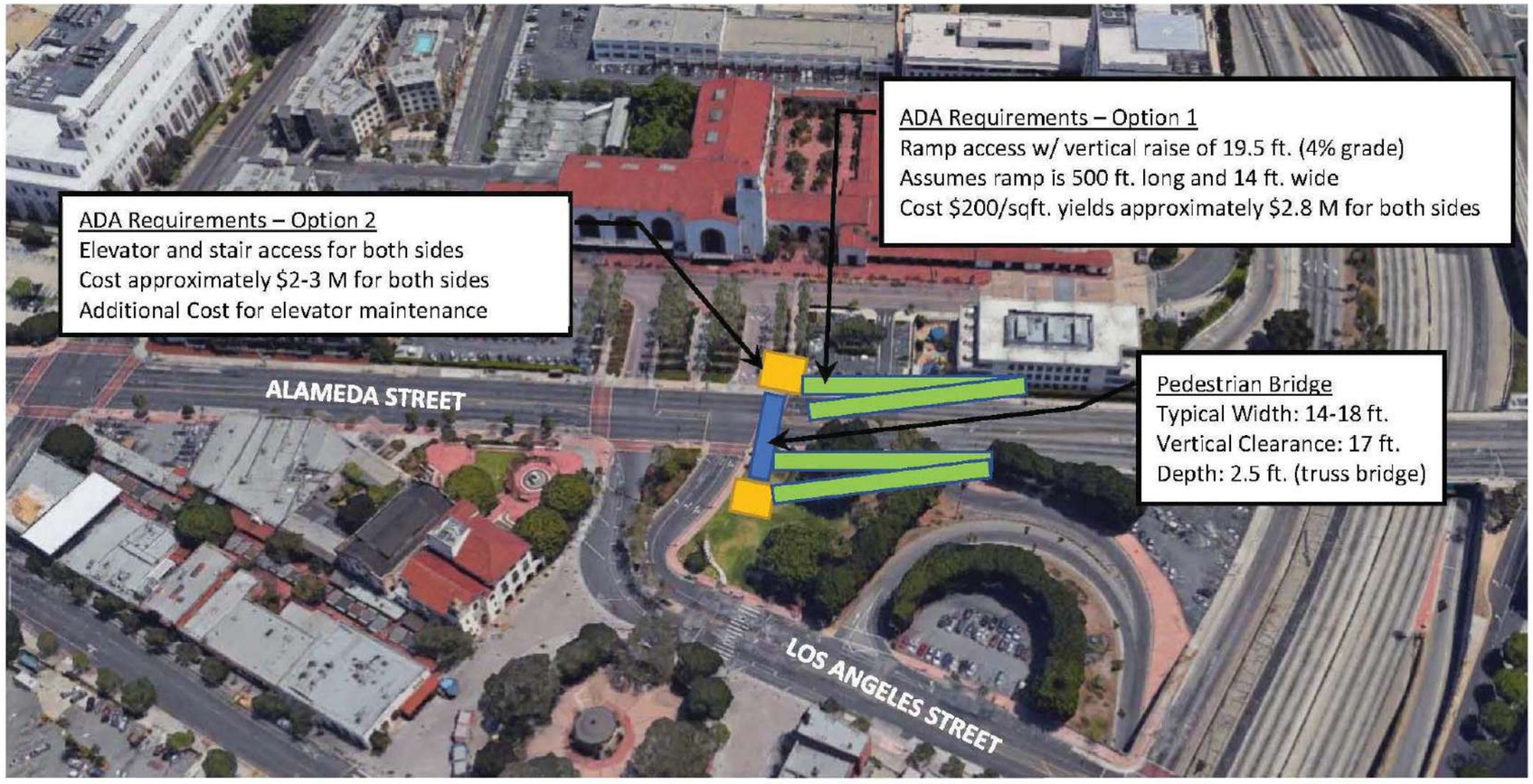
The Pedestrian Bridge Alternative would provide access from Father Serra Park on the west side of Alameda Street to the Union Station Forecourt on the east side of Alameda Street. The pedestrian bridge would be in place of the at-grade Los Angeles Street crossing shown in the proposed project. The location of the proposed bridge alternative is illustrated in Figure 4.1.5-1, *Alternative Considered but Not Carried Forward*. The bridge would span over Alameda Street in the east-west direction and include Americans with Disabilities Act (ADA) compliant ramps and/or elevator and staircase landings on either side. Measuring approximately 18 feet wide and 100 feet long, with a vertical clearance of 17 feet, several types of structures are available for bridge construction, including prefabricated truss, concrete girder, and arch/cable stay designs. ADA-compliant ramps would measure approximately 500 feet long and 14 feet wide. The construction and operation of the pedestrian bridge would allow pedestrians and bicyclists (walking their bicycles) to cross Alameda Street without conflicting with vehicles. No elements of the proposed project or Alternatives 2 and 3 would be constructed, so the roadway and lane configuration geometries and signal phasing on Alameda Street and the Alameda Street/Los Angeles Street intersection would remain in their current configuration. Additionally, the northern outbound only driveway from LAUS onto Alameda Street would remain in its current configuration.

From a historic preservation perspective, the pedestrian bridge alternative would dramatically alter the viewshed of LAUS and its connection with the El Pueblo de Los Angeles State Historic Park by visually obscuring or blocking the open space which connects the two entities. Additionally, the pedestrian bridge alternative would materially alter the immediate surroundings, or setting, in such a manner that it would impair the significance these historical resources. This significant alteration to the setting and viewshed of Los Angeles Union Station and El Pueblo de Los Angeles State Historic Park would result in a substantial adverse change to these historical resources. Furthermore, Los Angeles Union Station and El Pueblo de Los Angeles are listed in the National Register of Historic Places, and construction of the pedestrian bridge would materially alter the setting of these historical resources, which could be grounds for removing these historical resources from this historical register.

From a traffic perspective, by eliminating conflict points between pedestrians and vehicles, this alternative would in theory offer a safer crossing for pedestrians needing to cross Alameda Street, provided that all pedestrians use the bridge. Providing ramps with gentle slopes to conform with ADA requirements increases walking distance and may discourage use. The walking distances with the ramp configurations would be 20 times longer than crossing at grade. While the stairs/elevator bridge option would reduce the walking distance on the bridge to approximately 70 feet plus 17 feet vertical rise on each side of the bridge, this would still exceed the walking distance (and time) required to cross at-grade with the proposed project and Alternatives 2 and 3.

LEGEND

- Elevator Area
- Pedestrian Bridge
- Access Ramps



Structure Type	Pricing/SQFT
Prefabricated Truss Bridge	$250-$300
Concrete Girder	$400-$600
Arch/Cable Stay	$500-$1,000

Truss Bridge

Arch Bridge

Concrete Bridge

Estimated Construction Cost (assumes 18 ft. width and 100 ft. length)			
Structure Type	**Bridge Cost Range**	**With Elevator + Stairs ($3 M)**	**With Ramp ($2.8 M)**
Prefabricated Truss Bridge	$450,000 - $540,000	$3,450,000 - $3,540,000	$3,250,000 - $3,340,000
Concrete Girder	$720,000 - $1,080,000	$3,720,000 - $4,080,000	$3,520,000 - $3,880,000
Arch/Cable Stay	$900,000 - $1,800,000	$3,900,000 - $4,180,000	$3,700,000 - $4,600,000

FIGURE 4.1.5-1
Alternative Considered but Not Carried Forward

Cyclists would be substantially inconvenienced by the staircases on either side of the bridge due to the energy needed to carry a bicycle up and down each side of the bridge, so would be unlikely to use the bridge instead of crossing at grade. The elevator, while it would eliminate the inconvenience of the stairs for cyclists, mobility impaired, and those that would prefer not to walk, could add delay relative to crossing at grade if pedestrians need to wait for an elevator call on both sides of the bridge. PedSafe, the Pedestrian Safety Guide and Countermeasure Selection System, recommends that pedestrian overpasses only be implemented as measures of last resort when seeking to enhance pedestrian safety.[1] A pedestrian overpass conflicts with the project objectives, which seek to enhance connectivity and safety for all users. The Pedestrian Bridge Alternative would further pose a barrier to cyclists attempting to access LAUS while weakening connectivity to the station for bicyclists, pedestrians, and users with disabilities.

The Pedestrian Bridge Alternative is not consistent with project objectives 1, 2, and 5 identified above.

Studies show that pedestrian overpass usage depends on walking distances and the convenience of the overpass, relative to crossing the street at-grade, as perceived by potential users. Pedestrians are less likely to use an overpass if it takes longer to cross than at street level.[2] Given the increased walk distance and time associated with this alternative, most pedestrians are unlikely to use the bridge. Physical barriers to completely prevent at-grade pedestrian crossings would be difficult to install at the Alameda Street/Los Angeles Street intersection because of the opening needed for the driveway. Some pedestrians could easily walk into the street around the barrier and cross at grade. Given the opening for the driveway, pedestrians are likely to cross at grade. If motorists are not expecting pedestrians to cross, this could increase safety hazards for pedestrians that cross at grade.

The increased walking distance, combined with the barriers for cyclists, pose a challenge to advancing desirable and accessible paths for bicyclists and pedestrians. Because of the increased walk distance, and the potential for increased safety hazards, this pedestrian bridge alternative is expected to have a significant safety impact and therefore was not carried forward.

4.2 Alternatives Analysis

4.2.1 Alternative 1: No Project Alternative

Aesthetics

Alternative 1 would result in fewer impacts to aesthetics than the proposed project in regard to scenic vistas. Alternative 1 would result in no impacts to scenic vistas because it would not affect views of City of Los Angeles identified unique or historic features. As with the proposed project, Alternative 1 would result in no impacts to scenic resources within a state scenic highway, visual character/quality, or

[1] Federal Highway Administration, Office of Safety. 2013. *Pedestrian Safety Guide and Countermeasure Selection System*.

[2] Moore, R.L., and S.J. Older. 1965. Pedestrians and Motor Vehicles are Compatible in Today's World. *Traffic Engineering* 35 (12): 1965.

light/glare. Alternative 1 would not be visible from county or state eligible or designated scenic highways. Alternative 1 would not affect the existing visual character or quality of the project site. Alternative 1 would not affect existing sources of light or glare within the project site. Therefore, mitigation would not be required.

Agriculture and Forestry Resources

As with the proposed project, Alternative 1 would have no impacts in regards to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use because no changes would occur to agriculture and forestry resources within the project site due to the no project alternative. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located in or immediately adjacent to the project site. No change would occur to agriculture and forestry in regards to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use within the project site. Therefore, no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts in regards to Conflict with existing zoning for agricultural use, or a Williamson Act contract because no changes would occur to agriculture and forestry resources within the project site due to the no project alternative. The proposed project area is designated non-enrolled land and not enrolled under a Williamson Act contract. No agricultural uses or related operations are present within the project site or surrounding area. No change would occur to agriculture and forestry in regards to Conflict with existing zoning for agricultural use, or a Williamson Act contract within the project site. Therefore, no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts in regards to conflicting with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) because no changes would occur to agriculture and forestry resources within the project site due to the no project alternative. The City of Los Angeles has designated the project site as CR: Regional Commercial, and adjacent properties as HI: Hybrid Industrial Zone to the north, PF: Public Facilities Zones to the east and south, designated as property as owned and used by a government agency, M3: Heavy Industrial Zone to the south, CM: Commercial Manufacturing Zone to the south, and OS: Open Space Zone and PF: Public/Quasi-Public Facilities Zones to the west in both the City's General Plan and Zoning Plan. No areas zoned as any type of forestland located within the proposed project area. The proposed project would not require areas adjacent to the proposed project site to be rezoned. No change would occur to agriculture and forestry resources in regards to conflicting with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)) within the project site. Therefore, no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts in regards to loss of forest land or conversion of forest land to non-forest uses because no changes would occur to agriculture and forestry resources within the project site due to the no project alternative. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located in or immediately adjacent to the project site. No change would occur to agriculture and forestry in regards to loss of forest land or conversion of forest land to non-forest uses within the project site. Therefore, no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts to agriculture and forestry resources involving other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use because no changes would occur to agriculture and forestry resources within the project site due to the no project alternative. The proposed project would not affect the suitability of any designated farmland for development because the existing land use of the project area would not be changed. There are no forest lands in the proposed project area. No change would occur to agriculture and forestry resources involving other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use within the project site. Therefore, no mitigation would be required.

Air Quality

Alternative 1 would not conflict with or obstruct implementation of the applicable air quality plan as no project would be undertaken. The State Implementation Plan has considered regional population growth and the strategies required to reduce mobile emissions. These would occur in the absence of the proposed project and as a result, Alternative 1 would comply with applicable air quality plans because it would not lead to additional traffic, growth, or development.

Alternative 1 would not violate any air quality standard or contribute substantially to an existing or projected air quality violation as no project would be undertaken. Existing regulations such as the Advanced Clean Car Program and other state level mobile source emission reduction programs would reduce vehicle emissions in the region by making vehicle manufacturers achieve higher fuel efficiency in their fleet averages. This would offset the growth and has been accounted for in the State Implementation Plan and strategies to reach attainment for criteria air pollutants in the SCAB.

Alternative 1 would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors) as no project would be undertaken. Because Alternative 1 would result in no project level emissions, there would be no impact on the cumulative net increase of any criteria pollutant.

Alternative 1 would not expose sensitive receptors to substantial pollutant concentrations as no project would be undertaken. Alternative 1 would result in no construction so sensitive receptors would not be exposed to heavy-duty construction equipment. There would be no impact to sensitive receptors as their exposure to substantial pollutant concentrations would remain unchanged from existing conditions.

Alternative 1 would not create objectionable odors affecting a substantial number of people as no project would be undertaken. Alternative 1 would result in no construction, so no odor-producing diesel heavy duty construction equipment would be needed at the project site. Odors would remain unchanged from existing conditions.

Greenhouse Gas Emissions

Alternative 1 would have a less than significant impact on generating GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Alternative 1 would include regional growth and subsequent increases in traffic that would occur independent of the proposed project. As with the proposed project, Alternative 1 would not generate significant GHG emissions during either construction or operation. Therefore, there would be a less than significant impact.

Alternative 1 would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs because not building anything would result in no project level emissions. Therefore, there would be no impact.

Biological Resources

As with the proposed project, Alternative 1 would result in no impacts to candidate, sensitive, or special status species.

As with the proposed project, Alternative 1 would result in no impacts to riparian habitat or other sensitive natural communities.

As with the proposed project, Alternative 1 would result in no impacts to federally protected wetlands.

As with the proposed project, Alternative 1 would result in no impacts to movement of any migratory fish or wildlife species or an established wildlife corridor. Compared to the proposed project, Alternative 1 would result in fewer impacts to biological resources in relation to impeding the use of native wildlife nursery sites. Non-native trees within the project site have the potential to serve as suitable nesting habitat for native bird species afforded protection pursuant to the MBTA. Because the proposed project would not be developed under Alternative 1, there would be no impact, and implementation of mitigation measure MM-BIO-1 would not be required.

As with the proposed project, Alternative 1 would result in no conflicts with any local policies or ordinances.

As with the proposed project, Alternative 1 would result in no conflicts with any HCPs or NCCPs.

Cultural Resources

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape areas in their current configuration. No construction or improvements would occur. There would be no impact to historical resources pursuant to Section 15064.5(b) of the State CEQA Guidelines. Nor would there be contribution to cumulative impacts to historical resources. Unlike the proposed project, Alternative 1

would not require implementation of mitigation measures MM-CULTURAL-1 and MM-CULTURAL-2.

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape areas in their current configuration. No construction or improvements would occur. There would be no impact to archaeological resources pursuant to Section 15064.5(b) of the State CEQA Guidelines. Nor would there be contribution to cumulative impacts to archaeological resources. Unlike the proposed project, Alternative 1 would not require implementation of mitigation measures MM-CULTURAL-1 and MM-CULTURAL-2.

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape areas in their current configuration. No construction or improvements would occur. There would be no impact to paleontological resources pursuant to Section 15064.5(b) of the State CEQA Guidelines. Nor would there be contribution to cumulative impacts to paleontological resources. Unlike the proposed project, Alternative 1 would not require implementation of mitigation measure MM-CULTURAL-3.

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape acres in their current configuration. No construction or improvements would occur. There would be no impact to human remains pursuant to Section 15064.5(b) of the State CEQA Guidelines. Nor would there be contribution to cumulative impacts to human remains. Unlike the proposed project, Alternative 1 would not require implementation of mitigation measure MM-CULTURAL-4.

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape acres in their current configuration. No construction or improvements would occur. There would be no impact to tribal cultural resources pursuant to Section 15064.5(b) of the State CEQA Guidelines. Nor would there be contribution to cumulative impacts to tribal cultural resources. Unlike the proposed project, Alternative 1 would not require implementation of mitigation measures MM-CULTURAL-1 or MM-CULTURAL-2.

Energy

Alternative 1 would result in no significant impact in regards to adopted energy conservation plans and other sustainability metrics in local plans. The proposed project area currently includes the parking area for Union Station which is a hub for commercial buses, trains, and subways. Alternative 1 would use energy resources in a wasteful and inefficient manner thus resulting in a significant impact. Alternative 1 would not decrease reliance on fossil fuels such as coal, natural gas, or oil as compared to the proposed project. The proposed project would eliminate driving lanes and incorporate a pedestrian walkway thus reducing energy resource consumption while the alternative would include more motor vehicle lanes and less space for active transportation. Keeping the project area as is would allow for more vehicles miles to be traveled in the project vicinity in comparison to the proposed project and thus would have a significant impact.

Geology and Soils

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape areas in their current configuration. No construction or improvements would occur. There would be no impact to geology or soils. Impacts from underlying soil characteristics such as expansive soils, corrosive soils, erosive soils, and subsidence potential would remain at background levels. The regional risks from seismically-related (e.g. surface fault rupture, seismic ground shaking, and liquefaction) and non-seismically-related hazards (e.g. landslides) to structures would remain unchanged. No alteration to the existing septic and sewage water system would required. Alternative 1 would not require implementation of mitigation measures.

Hazards and Hazardous Materials

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape areas in their current configuration. No construction or improvements would occur. Alternative 1 would have less than significant impact to hazards or hazardous materials. Like the proposed project, Alternative 1 has the potential to result in significant Impacts to hazards and hazardous materials in relation to creating a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. There are 24 sites listed in association with LAUS, and an additional 39 sites in the other properties located within one-quarter mile of the proposed project site (Table 3.9.2-1). The historic land uses in and adjacent to the proposed project area are also known sources of hazardous materials, including vehicular use of roadways, fuels station, and adjacent rail and bus uses, manufacturing , and industrial land uses. The potential presence of hydrocarbons, metals, and persistent pesticides in soil along or adjacent to former railroad tracks along Alameda Street represent a potential environmental concern. Elevated concentrations of lead (from use of leaded gasoline) and other metals are sometimes associated with older roadways. Based on a review of historical sources, Alameda Street, North Los Angeles Street, and Cesar Chavez (formerly Macy Street) have been present since at least 1888. Arcadia Street has been present since the mid-1950s. The potential exists for subsurface pollutants to be present as a result of a former gasoline station, which occupied the triangular property at the southwest corner of Alameda Street and Cesar Chavez. Even the historic yellow traffic markings (thermoplastic and paint) used to demarcate lanes in the street may potentially contain hazardous levels of lead chromate. There is potential of naturally occurring oil seeps within the project area, or impacted soil from a crude oil pipeline beneath Alameda Street.

Additionally, Alternative 1 would have the potential to result in significant impacts to hazards and hazardous materials with respect to the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. There are two existing schools located within one-quarter mile of the project study area.

Unlike the proposed project, Alternative 1 would not require implementation of mitigation measures MM-HAZ-1 through MM-HAZ-4. No Mitigation measures are required, as no construction activities would occur. All potential impacts to Alternative 1 are related to historical contamination in the area.

Hydrology and Water Quality

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape areas in their current configuration. No construction or improvements would occur. The benefits of reducing impervious areas would not be achieved under Alternative 1. Alternative 1 would also not fulfill the project objective of reduced consumptive water use in a cost effective manner. There would be no impact to hydrology and water quality.

Land Use and Planning

Similar to the proposed project, Alternative 1 would result in no impacts with regard to physically dividing an established community, as there would be no new development. Therefore, mitigation would not be required.

Similar to the proposed project, Alternative 1 would result no impacts with regard to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

Central City Community Plan

Similar to the proposed project, Alternative 1 is consistent with the Central City Community Plan.

Central City North Community Plan

Similar to the proposed project, Alternative 1 is consistent with the CCNCP.

Draft Downtown Community Plan 2040 (DTLA 2040)

Similar to the proposed project, Alternative 1 is consistent with the DTLA 2040.

Alameda District Specific Plan

Similar to the proposed project, Alternative 1 is consistent with the ADP.

SCAG 2016-2040 RTP/SCS

Similar to the proposed project, Alternative 1 is consistent with the SCAG 2016-2040 RTP/SCS.

Project Restore Civic Crossroads Plan

Similar to the proposed project, Alternative 1 is consistent with the Project Restore Civic Crossroads Plan.

LADOT Strategic Plan – Great Streets for LA

Similar to the proposed project, Alternative 1 is consistent with the LADOT Strategic Plan – Great Streets for LA.

Los Angeles City Bicycle Plan 2010

Similar to the proposed project, Alternative 1 is consistent with the Los Angeles City Bicycle Plan 2010.

The Connect US Action Plan

Similar to the proposed project, Alternative 1 is consistent with the Connect US Action Plan.

Therefore, mitigation is not required.

Similar to the proposed project, Alternative 1 would result in no impacts with regard to conflict with any applicable HCP or NCCP, because there are no existing or proposed HCPs or NCCPs that have provisions that are applicable to the proposed project site. Therefore, mitigation would not be required.

Mineral Resources

As with the proposed project, Alternative 1 would have no impacts in regards to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Alternative 1 would result in no impacts to mineral resources in regards to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state because no changes would occur to mineral resources within the project site due to the no project alternative. No change would occur in regards to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state within the project site. Therefore, no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts in regards to the loss of availability of a locally important mineral resource recovery site. Alternative 1 would result in no impacts to mineral resources in regards the loss of availability of a locally important mineral resource recovery site because no changes would occur to mineral resources within the project site due to the no project alternative. No change would occur in regards the loss of availability of a locally important mineral resource recovery site within the project site. Therefore, no mitigation would be required.

Noise

Unlike the proposed project, Alternative 1 would have no impacts in regards to generating temporary increases in noise due to project construction. No change would occur in regards to temporary noise due to construction or operation of the proposed project and would result in no impact to noise in relation to exposure or generation of noise levels in excess of established standards, and no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts in regards to exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. No groundborne vibration would occur due to the Alternative 1 and would result in no impact to noise in relation to exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels, and no mitigation would be required.

Unlike the proposed project, Alternative 1 would have no impacts in regards to a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. No change would occur in regards to noise due to construction or operation of the proposed project and would result in no impact to noise in relation to a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, and no mitigation would be required.

Unlike the proposed project, Alternative 1 would have no impacts in regards to a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. No change would occur in regards to temporary noise due to construction or operation of the proposed project and would result in no impact to noise in relation to a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, and no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts in regards to exposure of people residing or working in the project area to excessive noise levels due to proximity to a public airport. The project area is outside of the LAX airport noise contour. The proposed project will not generate operational noise levels that would increase the noise within the existing environment and would result in no impact to noise in relation to exposure of people residing or working in the project area to excessive noise levels due to proximity to a public airport, and no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts in regards to exposure of people residing or working in the project area to excessive noise levels due to proximity to a public airport. The project site is not located within the vicinity of a private airstrip and would result in no impact to noise in relation to exposure of people residing or working in the project area to excessive noise levels due to proximity to a public airport, and no mitigation would be required.

Population and Housing

As with the proposed project, Alternative 1 would result in no impacts to population and housing. Alternative 1 would not affect population growth and would not affect the transient population currently present within the project site. There is no existing housing within the project site. A few temporary encampments were observed during site reconnaissance along Arcadia Street adjacent to the project site and on a few of the freeway bridges crossing SR-101 to the south of the project site. However, because these are unauthorized encampments, those individuals could be asked to leave whether or not the project is developed. Therefore, no mitigation would be required.

Public Services

As with the proposed project, Alternative 1 would have no impacts to fire protection services for the project site because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate increased fire protection services requiring the need for new or substantially altered fire engine or fire truck stations. Alternative 1 would result in no impacts to public services in regards to fire protection services because no changes would occur to fire department

facilities or emergency personnel currently serving the project site. No change would occur to fire lane, fire access, fire hydrants or fire equipment within the project site. Therefore, no mitigation would be required.

As with the proposed project, the no project alternative would have no impacts to police protection services for the project site because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate increased police protective services requiring the need for new or substantially altered police stations or substations. Alternative 1 would result in no impacts to public services in regards to police protection services because no changes would occur to police department and station facilities or police enforcement personnel currently serving the project site. No change would occur to emergency access, on-site security design features, and crime prevention features currently in-place within the project site. Therefore, no mitigation would be required.

As with the proposed project, Alternative 1 would have no impacts to schools and educational facilities for the project site because there would be no increase in residents within the proposed project area that would necessitate the need for new or substantially altered schools. The no project alternative would result in no impacts to public services in regards schools and educational facilities because no changes would occur to schools or educational facilities currently serving the project site. Therefore, no mitigation would be required.

Alternative 1 would result in no impacts in regard to parks. Alternative 1 would not involve the construction of new housing units or businesses and, therefore, would not increase demand for parks or recreational facilities.

As with the proposed project, Alternative 1 would have no impacts to other facilities, including libraries and hospitals for the project site, because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate the need for new or substantially altered libraries or hospitals. Alternative 1 would result in no impacts to public services in regards to other facilities because no changes would occur to existing demand due to the no project alternative. Therefore, no mitigation would be required.

Recreation

As with the proposed project, Alternative 1 would result in no impacts to recreation regarding increased use of recreational facilities or construction of new or expanded recreational facilities which might have an adverse physical effect on the environment.

Transportation and Traffic

Alternative 1 for Transportation and Traffic was covered in Section 3.17, *Transportation and Traffic*, as Future without Project.

Utilities and Service Systems

Alternative 1 would leave the short-term parking, streets, and associated sidewalls and landscape areas in their current configuration. No construction or improvements would occur. There would be no impact to utilities.

4.2.2 Alternative 2: Full Closure of Los Angeles Street

Aesthetics

Similar to the proposed project, Alternative 2 would result in no impacts to scenic resources within a state scenic highway, visual character/quality, and light/glare, and less than significant impacts to scenic vistas. As with the proposed project, Alternative 2 would result in less than significant impacts to City-designated scenic vistas (unique or historic features) because it would also involve the installation of additional trees along the east sidewalk of Alameda Street where there are no existing street trees that would affect public access to views of unique urban or historic features from park lands and public rights-of-way.

As with the proposed project, Alternative 2 would not affect scenic resources within a state scenic highway due to intervening topography and the project site's location at a distance from eligible or officially designated state scenic highways.

As with the proposed project, Alternative 2 would result in less than significant impacts to visual character because the proposed project would benefit the visual character through creating visual connectivity.

As with the proposed project, Alternative 2 would result in no impacts to light and glare as a result of the installation of new lights and a water feature which would be new source of daytime glare because the project site is already characterized by a high existing level of nighttime light and glare and day and nighttime views would not be affected. Therefore, mitigation would not be required.

Agriculture and Forestry Resources

As with the proposed project, Alternative 2 would have no impact in regards to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located in or immediately adjacent to the project site. There will be no permanent conversion of land to non-agricultural use due to the proposed project.[3] No change would occur to agriculture and forestry in regards to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping

[3] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Accessed 26 April 2016. *California Important Farmland Finder.* Available at: http://maps.conservation.ca.gov/ciff/ciff.html

and Monitoring Program of the California Resources Agency, to non-agricultural use within the project site. Therefore, Alternative 2 would have no impacts in regards to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), and no mitigation would be required.

As with the proposed project, Alternative 2 would have no impacts in regards to Conflict with existing zoning for agricultural use, or a Williamson Act contract. The proposed project area is designated non-enrolled land and not enrolled under a Williamson Act contract. No agricultural uses or related operations are present within the project site or surrounding area. The CDC FMMP has identified the area as Urban and Built-Up Land at the statewide scale and the area has not been surveyed at the County scale. Based on the review of the land use designations and applicable Important Farmland map for the project site, there are no Farmlands located in or immediately adjacent to the project site. No agricultural uses or related operations are present within the project site or surrounding area. Due to its urban setting, the site area is not included in the FMMP. Therefore, Alternative 2 would have no impacts in regards to Conflict with existing zoning for agricultural use, or a Williamson Act contract, and no mitigation would be required.

As with the proposed project, Alternative 2 would have no impacts in regards to conflicting with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). The City of Los Angeles has designated the project site as CR: Regional Commercial, and adjacent properties as HI: Hybrid Industrial Zone to the north, PF: Public Facilities Zones to the east and south, designated as property as owned and used by a government agency, M3: Heavy Industrial Zone to the south, CM: Commercial Manufacturing Zone to the south, and OS: Open Space Zone and PF: Public/Quasi-Public Facilities Zones to the west in both the City's General Plan and Zoning Plan. No areas zoned as any type of forestland located within the proposed project area. The proposed project would not require areas adjacent to the proposed project site to be rezoned. Therefore, Alternative 2 would have no impacts in regards to conflicting with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)), and no mitigation would be required.

As with the proposed project, Alternative 2 would have no impacts in regards to loss of forest land or conversion of forest land to non-forest uses. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located in or immediately adjacent to the project site. The proposed project is located within an existing designated urban and built-up land area and all construction activities would be undertaken within the existing designated urban and built-up land area. Northgate Crossing Specific Plan Land Use element and Zoning Ordinance were reviewed to determine the compatibility of the proposed project with adopted land use plans, policies, and regulations. Therefore, Alternative 2 would have no impacts in regards to loss of forest land or conversion of forest land to non-forest uses, and no mitigation would be required.

As with the proposed project, Alternative 2 would have no impacts to agriculture and forestry resources involving other changes in the existing environment which, due to their location or nature, could result

in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. The proposed project is located within an existing designated urban and built-up land area and all construction activities would be undertaken within the existing designated urban and built-up land area. The proposed project would not affect the suitability of any designated farmland for development because the existing land use of the project area would not be changed. There are no forest lands in the proposed project area. Therefore, Alternative 2 would have no impacts to agriculture and forestry resources involving other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use, and no mitigation would be required.

Air Quality

As with the proposed project, Alternative 2 would result in less than significant impacts with regard to conflicting with or obstructing implementation an applicable air quality plan. Alternative 2 would not substantially change the construction scenario or assumptions. For operation, Alternative 2 would result in improved LOS on Alameda Street compared to the proposed project.

As with the proposed project, Alternative 2 would result in less than significant impacts with regard to violating any air quality standard or contribute substantially to an existing or projected air quality violation. As shown in the traffic analysis, Alternative 2 would result in similar LOS in the project study area compared to the proposed project. For both AM and PM Peak, the intersection of Alameda/Cesar Chavez would remain the same as the cumulative base and cumulative base plus proposed project at LOS D for Alternative 2. For AM Peak, the intersection of Alameda/Los Angeles would improve to LOS C from LOS D (cumulative base) compared to LOS E for the proposed project. For PM Peak, the intersection of Alameda/Los Angeles would remain the same from LOS C (including cumulative base) compared to LOS D with proposed project. For AM Peak, the intersection of Alameda/Arcadia would improve to LOS E from LOS F (including cumulative base and cumulative base plus project). For PM Peak, The intersection of Alameda/Arcadia would worsen from LOS D (including cumulative base) to LOS F compared to LOS E with proposed project.

As with the proposed project, Alternative 2 would result in less than significant impacts with regard to resulting in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors. With a similar construction scenario and reduced operational emissions compared to the proposed project, Alternative 2 would have a similar effect on cumulatively considerable net increases of any criteria pollutant.

As with the proposed project, Alternative 2 would result in less than significant impacts with regard to exposing sensitive receptors to substantial pollutant concentrations. The construction scenario and assumptions would be relatively unchanged compared to the proposed project. Sensitive receptors would be no closer or farther to the construction than in the proposed project. Similar to the proposed project, Alternative 2 would not generate any new vehicle trips to the project study area.

As with the proposed project, Alternative 2 would result in less than significant impacts with regard to creating objectionable odors affecting a substantial number of people. The construction scenario and assumptions would be relatively unchanged compared to the proposed project. Odors during operation would be similar to the proposed project.

Greenhouse Gas Emissions

Similar to the proposed project, Alternative 2 would have a less than significant impact on generating GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Alternative 2 would include many of the elements described in the project description with the exception of the partial closure of Los Angeles Street. With no change in VMT or the forecourt design compared to the proposed project, Alternative 2 would not generate significant GHG emissions during either construction or operation. Therefore, there would be a less than significant impact.

Similar to the proposed project, Alternative 2 would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. As with the proposed project, emissions from Alternative 2 would be similar to the proposed project as the full closure of Los Angeles Street would not result in a substantial change to the construction scenario or cause a significant operational change with regard to emissions from construction, operation, and maintenance. Alternative 2 would continue to comply to the applicable plans, policies and regulations related to GHG emissions. Therefore, there would be no impact.

Biological Resources

As with the proposed project, Alternative 2 would result in no impacts to candidate, sensitive, or special status species.

As with the proposed project, Alternative 2 would result in no impacts to riparian habitat or other sensitive natural communities.

As with the proposed project, Alternative 2 would result in no impacts to federally protected wetlands.

As with the proposed project, Alternative 2 would result in no impacts to movement of any migratory fish or wildlife species or an established wildlife corridor. As with the proposed project, Alternative 2 would have the potential to result in impacts to biological resources in relation to impeding the use of native wildlife nursery sites. Non-native trees within the project site have the potential to serve as suitable nesting habitat for native bird species afforded protection pursuant to the MBTA. Similar to the proposed project, impacts to nesting birds would be reduced to below the level of significance with the implementation of mitigation measure MM-BIO-1.

As with the proposed project, Alternative 2 would result in no conflicts with any local policies or ordinances.

As with the proposed project, Alternative 2 would result in no conflicts with any HCPs or NCCPs.

Cultural Resources

Similar to the proposed project, Alternative 2 would have the potential to result in significant impacts to historical resources as defined in Section 15064.5(b) of the CEQA Guidelines. Under Alternative 2, all improvements to Alameda, Los Angeles, and Arcadia streets would occur within the public right-of-way. These streets would continue to convey pedestrian and bicycletraffic, other than the short section of Los Angeles Street that would be closed to vehicle traffic, and modification of the roadways would not result in a change to setting to Los Angeles Union Station. No property would be acquired in order to construct these improvements. Metro would work with the City of Los Angeles for the full closure scenario. The full closure of Los Angeles Street would improve pedestrian connectivity to Los Angeles Union Station, which would be a benefit. Under Alternative 2, these improvements would increase the park-like setting of El Pueblo de Los Angeles and are intended to promote greater use of the State Historic Park. As with the proposed project, Alternative 2 would require excavation up to 15 feet below ground surface to install project features, including tree wells, traffic signals, utilities, in areas comprising the existing short-term parking areas; up to 4 feet below ground surface for the Alameda Street, and associated sidewalks improvements; and up to 15 feet below ground surface for tree wells in the sidewalks. This excavation has the potential to encounter previously unrecorded historical resources. As with the proposed project, Alternative 2 would require implementation of MM-CULTURAL-1 and MM-CULTURAL-2 to reduce impacts to historical resources to below the level of significance.

Similar to the proposed project, Alternative 2 would have the potential to result in significant impacts to archaeological resources. Impacts would be the same as for the proposed project. As with the proposed project, Alternative 2 would require implementation of MM-CULTURAL-1 and MM-CULTURAL-2 to reduce impacts to archaeological resources to below the level of significance.

Similar to the proposed project, Alternative 2 would have the potential to result in significant impacts to paleontological resources. Impacts would be the same as for the proposed project. As with the proposed project, excavation under Alternative 2 would not exceed a depth of 15 feet. However, based upon the results of the record search, there is a potential to encounter significant paleontological resources, sites, or unique geological features if excavations extend into older Quaternary deposits. As with the proposed project, Alternative 2 would require implementation of MM-CULTURAL-3 to reduce impacts to paleontological resources to below the level of significance.

Similar to the proposed project, Alternative 2 would have the potential to result in significant impacts to human remains. Impacts would be the same as for the proposed project. As with the proposed project, Alternative 2 would require implementation of MM-CULTURAL-4 to reduce impacts to human remains to below the level of significance.

Similar to the proposed project, Alternative 2 would have the potential to result in significant impacts to tribal cultural resources pursuant to AB 52. Impacts would be the same as for the proposed project. As with the proposed project, Alternative 2 would require implementation of MM-CULTURAL-1 and MM-CULTURAL-2 to reduce impacts to tribal cultural resources to below the level of significance.

Energy

Alternative 2, in many respects is very similar to the proposed project. It would not conflict with adopted energy conservation plans and other sustainability metrics in the local plans thus resulting in no significant impact. Alternative 2 would not use energy resources in a wasteful and inefficient manner and would have impacts similar to the proposed project thus no significant impact. Alternative 2 would decrease reliance on fossil fuels such as coal, natural gas, and oil as larger pedestrian walkways would be available and motorized vehicle lanes would be eliminated. This would result in fewer vehicle miles traveled in and around the vicinity of the project. Alternative 2 would result in fewer impacts than the proposed project.

Geology and Soils

Alternative 2 would not be vulnerable to a surface fault rupture as no AP delineated faults are located underneath or in the direct vicinity of the study area. As the survey area is not likely to contain areas susceptible to liquefaction, landslides, or expansive soils, Alternative 2 is not likely to be impacted by these hazards. Mitigation measures would not be required for these resources.

Similar to the proposed project, Alternative 2 would be susceptible to strong seismic events due to its proximity to CGS-mapped faults. Impacts would be the same as for the proposed project. Mitigation would not be required to reduce potential impacts below the level of significance. Alternative 2 would require the Contractor to address strong seismic ground shaking in the CMP and identify construction methodologies that would limit the proposed perimeter upgrades vulnerability to earthquake events.

Similar to the proposed project, Alternative 2 would be susceptible to soil loss during construction. Impacts would be the same as for the proposed project. As with the proposed project, under Alternative 2 the construction contractor would be required to incorporate stormwater BMPs consistent with the *California Storm Water Best Management Practice Handbooks: Construction*. This would reduce the potential for soil loss during construction. Mitigation would not be required to reduce potential impacts below the level of significance.

Similar to the proposed project, Alternative 2 could be vulnerable seismic settlement or differential compaction if the placement of deep fills is required. If deep fills are required, alternative may have the potential to increase maintenance, repair, and replacement costs and schedules. Mitigation may be required to reduce potential impacts below the level of significance. Alternative 2 would require the Contractor to address existing soils and fill soils for their stability in the CMP and identify construction methodologies that would limit the proposed perimeter upgrades vulnerability to differential settlement.

Similar to the proposed project, Alternative 2 could be vulnerable to soils corrosive to steel and concrete. If unabated, high soluble sulfate soils and groundwater would corrode and weaken Alternative 2 pavements resulting in potential increases in maintenance, repair, and replacement costs and schedules. Alternative 2 would reduce the vulnerability of project pavements to corrosion from sulfates. This would reduce impacts related to corrosive soils to below the level of significance

Hazards and Hazardous Materials

Impacts and mitigation related to Alternative 2 would be identical to those described for the proposed project. Additionally, Alternative 2, like the proposed project would result in less than significant impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The proposed project consists of improvements to facilitate alternative transportation, particularly pedestrians and cyclists, including connections to rail, and bus. The transport, use, and storage of hazardous materials are governed by a range of federal, state, and local statutes and regulations. These improvements would require incidental use of cleaning supplies, fuels, herbicides, and pesticides. Since Metro is a public agency, the use and storage of these materials is regulated by a Business Plan. The application of herbicides and pesticides must be performed under the supervision of a licensed applicator, consistent with the specifications if the Materials Data Safety Sheet. Therefore, there would be less than significant impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Like the proposed project, Alternative 2 would require the implementation of mitigation measures HAZ-1, HAZ-2, HAZ-3, and HAZ-4.

Hydrology and Water Quality

The Full Closure of Los Angeles Street alternative would include many of the elements described in the project description with the exception of the partial closure of Los Angeles Street. Instead of the partial closure as described, this alternative would have the complete closure. With the complete closure there would be a continuous pedestrian connection between Father Serra Park and El Pueblo, and provide a continuous sidewalk adjacent to Alameda Street. The full closure also provides the potential for a wider crossing area for pedestrians and bicyclists. The Forecourt changes would remain as proposed in the project description. All impacts associated with alternative 2 would be the same as the proposed project.

Land Use and Planning

Similar to the proposed project, Alternative 2 would result in no impacts with regard to physically dividing an established community, as there would be no new development. Therefore, mitigation would not be required.

Similar to the proposed project, Alternative 2 would result in no impacts with regard to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

Central City Community Plan

Similar to the proposed project, Alternative 2 is consistent with the Central City Community Plan.

Central City North Community Plan

Similar to the proposed project, Alternative 2 is consistent with the CCNCP.

Draft Downtown Community Plan 2040 (DTLA 2040)

Similar to the proposed project, Alternative 2 is consistent with the DTLA 2040.

Alameda District Specific Plan

Similar to the proposed project, Alternative 2 is consistent with the ADP.

SCAG 2016-2040 RTP/SCS

Similar to the proposed project, Alternative 2 is consistent with the SCAG 2016-2040 RTP/SCS.

Project Restore Civic Crossroads Plan

Similar to the proposed project, Alternative 2 is consistent with the Project Restore Civic Crossroads Plan.

LADOT Strategic Plan – Great Streets for LA

Similar to the proposed project, Alternative 2 is consistent with the LADOT Strategic Plan – Great Streets for LA.

Los Angeles City Bicycle Plan 2010

Similar to the proposed project, Alternative 2 is consistent with the Los Angeles City Bicycle Plan 2010.

The Connect US Action Plan

Similar to the proposed project, Alternative 2 is consistent with the Connect US Action Plan.

Therefore, mitigation would not be required.

Similar to the proposed project, Alternative 2 would result in no impact regard to conflict with any applicable HCP or NCCP because there are no existing or proposed HCPs or NCCPs that have provisions that are applicable to the proposed project site. In order to account for the increased traffic on Alameda street signal modifications would be made for 6 intersections during peak AM hours and 6 intersections during peak PM hours. .

Mineral Resources

As with the proposed project, Alternative 2 would have no impacts to mineral resources in regards to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state for the project site. The project site lies within a designated MRZ-3 zone that contains known mineral occurrences of undetermined mineral resource significance. The proposed

project site is zoned regional commercial and heavy industrial, and the project site has been developed with structures and is inaccessible for mining extraction. Similar to the proposed project, no loss of availability of a known mineral resource that would be of value to the region and the residents of the state would occur within the project site. Therefore, no mitigation would be required.

As with the proposed project, Alternative 2 would have no impacts to mineral resources in regards to the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. There are no known mineral resource recovery sites of local importance located within the proposed project site. There are no designated active or abandoned mine sites within the project site. There are no active or abandoned oil fields or extraction facilities on the proposed project site. Similar to the proposed project, project construction is expected to utilize construction aggregate resources from the nearest sand and gravel mine in proximity to the proposed project site. All grading would be balanced within the property limits without the need for import or export from the site. No loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan would occur within the project site. Therefore, no mitigation would be required.

Noise

Construction

As with the proposed project, Alternative 2 would generate temporary increases in noise due to project construction. During each phase of construction the noise level would have the potential to exceed the City of Los Angeles day time noise level 75 dBA at any given hour during day time construction. Construction activities would occur at any time between the hours of 7:00 AM and 6:00 PM Monday through Friday and 8:00 AM to 6:00 PM on Saturdays. Project design features and BMPs consistent with the City of Los Angeles Municipal Code requirements articulated in Section 112.05 and Section 41.40[4] would be implemented to reduce the temporary increase in noise levels from construction of the proposed project to less than significant levels. The use of temporary noise mufflers barriers and blankets would reduce noise levels for construction equipment by up to 15 dBA[5] Therefore, with the incorporation of project design features and BMPs, Alternative 2 would result in less than significant impacts from noise in relation to exposure or generation of noise levels in excess of established standards, and no mitigation would be required.

Operation

As with the proposed project, Alternative 2 would not result in new vehicle trips on nearby local access roads to LAUS. However, some traffic would shift due to the closure of Los Angeles Street. Improvements resulting in road closures and reduced lanes would reduce noise levels within the project

[4] City of Los Angeles Municipal Code. n.d. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

[5] U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

area. Therefore, Alternative 2 would result in less than significant impacts from noise in relation to exposure or generation of noise levels in excess of established standards, and no mitigation would be required.

As with the proposed project, Alternative 2 would result in less than significant impacts to noise in relation to generation of excessive ground-borne vibration or ground-borne noise. As a result of the construction, operation, and maintenance of the proposed project, no groundborne vibration would occur. The proposed project reduces the number of travel lanes and does not add capacity to existing roadways. Groundborne vibration from vehicular traffic rarely causes a disturbance within buildings located in urban environments unless the pavement surface is uneven, or the receptor is highly sensitive (e.g., a scientific research establishment) to groundborne vibration. Therefore, Alternative 2 would not result in significant impacts to noise, and no mitigation would be required.

As with the proposed project, Alternative 2 would result in less than significant impacts to noise in relation to permanent increases in ambient noise levels as a result of operation and maintenance of the proposed project. The operation of the proposed project would not increase noise over existing exterior levels within in the project area. The proposed project improvements will not add additional traffic on nearby local access roads to LAUS. Nearby buildings would not experience a change in noise levels during the operation of the project. Therefore, Alternative 2 would result in less than significant impacts to noise in relation to permanent increases in ambient noise levels as a result of operation and maintenance of the proposed project, and no mitigation would be required.

As with the proposed project, Alternative 2 would result in less than significant impacts in regards to noise related to temporary or periodic increases in ambient noise levels. The construction of the proposed project would require four phases of construction: demolition, site preparation, grading and paving (including striping/new configuration on Alameda and Los Angeles St). Noise would be produced by the operation of heavy-duty equipment. Construction noise levels were estimated using FTA guidance (FTA, 2006), which provides a method for calculating noise levels for the two noisiest pieces of equipment operating in each construction phase using reference noise levels for individual pieces of equipment. Full power operation for a time-period of one hour was assumed because more construction equipment operates continuously for periods of one hour or more at some point in the construction period. No ground effects were considered. The closest receptors are the Mosaic Apartments and La Plaza Park, which are within 50 feet of where construction would be occurring. During each phase of construction the noise level would have the potential to exceed the City of Los Angeles day time noise level 75 dBA at any given hour during day time construction (see Table 3.13.3-1, *Construction Equipment by Phase with Associated Maximum 1-hr L_{eq}*). Project design features and BMPs consistent with the City of Los Angeles Municipal Code requirements articulated in Section 112.05 and Section 41.40[6] would be implemented to reduce the temporary increase in noise levels from construction of the proposed project to less than significant levels. The use of temporary noise mufflers barriers and blankets would

[6] City of Los Angeles Municipal Code. n.d. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

reduce noise levels for construction equipment by up to 15 dBA[7] Therefore, impacts to noise related to temporary or periodic increases in ambient noise levels from Alternative 2 would be less than significant, and no mitigation is required.

As with the proposed project, Alternative 2 would not result in impacts to noise in relation to public airports. The project area is outside of the LAX airport noise contour. The proposed project will not generate operational noise levels that would increase the noise within the existing environment. Therefore, Alternative 2 would not result in exposure to people residing or working in the project area to excessive noise levels associated with public airports or public use airports.

As with the proposed project, Alternative 2 would not result in impacts to noise in relation to private airstrips. The project site is not located within the vicinity of a private airstrip (Figure 3.9.2-3, *Airports*). The nearest private airstrip, Goodyear Blimp Base Airport, is located approximately 14 miles southwest of the project site. Therefore, Alternative 2 would not result in exposure to people residing or working in the project area to excessive noise levels associated with private airstrips.

Population and Housing

As with the proposed project, Alternative 2 would result in no impacts regarding population growth, displacement of people, or displacement of housing. Alternative 2 would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. Alternative 2 would result in no indirect impacts in regard to population growth because, although Alternative 2 would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, it would not involve major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth.[8] There is no housing within the project site, and no housing units would be removed due to Alternative 2. Alternative 2 would not be anticipated to directly displace people as there is no permanent population residing within the project site. A few temporary encampments were observed during site reconnaissance along Arcadia Street adjacent to the project site and on a few of the freeway bridges crossing SR-101 to the south of the project site. However, because these are unauthorized encampments, those individuals could be asked to leave whether or not the project is developed. Therefore, no mitigation would be required.

Public Services

As with the proposed project, Alternative 2 would have no impacts to fire protection services for the project site because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate increased fire protection services requiring the need for new or substantially altered fire engine or fire truck stations. Similar to the proposed project, Alternative 2 is

[7] U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

[8] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

intended to serve existing and anticipated residents, workers, visitors, and transit population and would incorporate a construction traffic management plan to reduce potential project construction impacts on the delivery of fire protection services. The construction traffic management plan would outline adequate measures to ensure emergency vehicle access during all aspects of project construction. No reduction of Fire Department personnel, equipment or apparatus access, fire lanes, or fire hydrants in or near the project site would take place due to the construction and operation of the proposed project. Emergency response times are not anticipated to differ from current response times. Therefore, no mitigation would be required.

As with the proposed project, Alternative 2 would have no impacts to police protection services for the project site because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate increased police protective services requiring the need for new or substantially altered police stations or substations. Similar to the proposed project, Alternative 2 has been designed to incorporate security provisions and features pursuant to the City of Los Angeles General Plan and LAPD's Design Out Crime Guidelines including lighting at night near the Forecourt and Esplanade Plaza, security to mitigate for any increased security risks due to additional foot traffic, controlled access to buildings, and illumination of public and semipublic spaces to minimize opportunities for criminal activity, therefore reducing the demands placed upon police protection services. The service ratio of 10 sworn officers per 1,000 residents for the Central Area Community Police Station service area consistent with the provisions established in the security element of the City of Los Angeles General Plan and Alameda District Specific Plan. Therefore, no mitigation would be required.

As with the proposed project, Alternative 2 would have no impacts to schools and educational services for the project site because there would be no increase in residents within the proposed project area that would necessitate the need for new or substantially altered schools. Alternative 2 would not involve the construction of new housing units or businesses and, therefore, would not increase demand for schools or educational facilities. The proposed project is a nonresidential use and would therefore not directly generate school-age children. Therefore, no mitigation would be required.

As with the proposed project, Alternative 2 would result in a net increase in publicly accessible open space in regard to parks for the project site. Alternative 2 would not involve the construction of new housing units or businesses and, therefore, would not increase demand for parks or recreational facilities. There is no housing within the project site. There is no existing recreation use within the project site. Similar to the proposed project, Alternative 2 includes the construction of a new civic plaza, including installation of fountains, within the footprint of the existing paved short-term parking lot within the project site, which is already developed and heavily graded. Therefore, no mitigation would be required.

As with the proposed project, Alternative 2 would have no impacts to other facilities including libraries and hospitals serving the project site, because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate the need for new or substantially altered libraries or hospitals. Alternative 2 would not involve the construction of new housing units or

businesses and, therefore, would not increase demand for libraries or hospitals serving the project site. Alternative 2 is intended to serve existing and anticipated residents, workers, visitors, and transit population. Therefore, no mitigation would be required.

Recreation

As with the proposed project, Alternative 2 would result in no impacts regarding increased use of recreational facilities or construction of new or expanded recreational facilities which might have an adverse physical effect on the environment. Alternative 2 would result in no impacts in regard to recreation because, although Alternative 2 would more effectively improve the convenience of accessing recreational facilities in the project vicinity via Los Angeles Union Station than would the proposed project, it would not involve major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth.[9] There is no recreation use within the project site, and the replacement of an existing paved parking lot with a civic plaza would result in no adverse physical effects on the environment. Therefore, no mitigation is required.

Transportation and Traffic

Alternative 2 Transportation Network & Traffic Projections

The full closure of Los Angeles Street would eliminate northbound travel on Los Angeles Street between the U.S. 101 on-ramp (north of Arcadia Street) and Alameda Street, and southbound travel between Alameda Street and Arcadia Street (though southbound travel from the existing parking lot on Los Angeles Street would be retained). The existing U.S. 101 on-ramp on Los Angeles Street would remain open, and accessible from northbound Los Angeles Street traffic.

The full closure would allow for the redistribution of green time from the northbound Los Angeles Street to northbound and southbound vehicles on Alameda Street, which would improve operations relative to the project. Vehicles that had been using Los Angeles Street are expected to take other streets within the network, and the diversion of these vehicle volumes is discussed in more detail below. Bus parking on Arcadia Street would be prohibited during peak periods in this alternative to maintain existing vehicle capacity.

Future with Alternative 2 (2029) Traffic Volumes

diversion of eastbound lefts is discussed below under Project Alternative 3 for both the AM and PM peak hours. Vehicles that were previously traveling south on Alameda Street and turning right onto North Los Angeles Street are assumed to redistribute using the following pattern in the AM and PM peak hours:

[9] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

- 30% diverted onto Spring Street
- 50% diverted onto Alameda Street
- 20% continue using Los Angeles street but turn onto Arcadia Street from Alameda Street to access Los Angeles Street

Vehicles that were previously traveling west from Union Station onto North Los Angeles Street are assumed to redistribute using the following pattern in the AM peak hour:

- 30% continue using Los Angeles Street but turn onto Arcadia Street from Alameda Street to access Los Angeles Street
- 70% diverted onto Spring Street via Arcadia Street and Alameda Street

During the PM peak hour, this shift pattern is expected to differ slightly for vehicles that were previously traveling west from Union Station onto Los Angeles Street due to congestion patterns in the PM peak hour:

- 40% continue using Los Angeles Street but turn onto Arcadia Street from Alameda Street to access Los Angeles Street
- 60% diverted onto Spring Street via Arcadia Street and Alameda Street

Vehicles that had been traveling southbound on Los Angeles Street onto U.S. 101 on-ramps are assumed to now use the on-ramp entrance on Alameda Street. All vehicles that had been using Los Angeles Street to access Union Station (eastbound through movement) or Alameda Street (eastbound right turn) are expected to continue using Los Angeles Street but turn right at Aliso Street to make a left turn onto Alameda Street. Based on existing vehicle counts and congestion patterns, vehicles that were turning right from Los Angeles Street onto southbound Alameda Street in the PM peak hour were assumed to be accessing the Metro ExpressLanes, while vehicles making this movement in the AM peak hour were assumed to be continuing south on Alameda Street.

Traffic volume shifts for Alternative 2 are illustrated in Appendix E.

Alternative Signal Optimization: Future with Alternative 2 (2029)

The following signal adjustments were made for this alternatives in the AM peak hour:

4. Alameda Street & Alpine Street
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
10. Alameda Street & Alhambra Avenue
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
13. Alameda Street & Main Street/Bauchet Street
    a. Additional green time given to the northbound/southbound phases from eastbound/westbound phases

    b. Signal offset adjusted to better coordinate with signals on Alameda Street
16. Main Street & Cesar Chavez Avenue
    a. Additional green time given to the eastbound/westbound phases from northbound/southbound phases
17. Alameda Street & Cesar Chavez Avenue
    a. Additional green time given to the eastbound/westbound phases from northbound/southbound phases
19. Alameda Street & Los Angeles Street
    a. Additional green time given to the northbound/southbound phases from westbound phase
    b. Eastbound phase eliminated; time allotted to eastbound leg given to northbound/southbound phases
21. Spring Street & Arcadia Street/27. Spring Street & Aliso Street
    a. Cycle length increased from 70 to 90 seconds to be consistent with other intersections on the corridors
    b. Additional green time given to the northbound/southbound phases
    c. Additional green time given to the southbound signal at Aliso Street
    d. Additional green time given to the westbound phase
    e. Reduced green time given to eastbound phase
22. Main Street & Arcadia Street/28. Main Street & Aliso Street
    a. Cycle length increased from 70 to 90 seconds to be consistent with other intersections on the corridors
    b. Signal offset adjusted to better coordinate with signals on Arcadia Street
23. Los Angeles Street & Arcadia Street/29. Los Angeles Street & Aliso Street
    a. Signal offset adjusted to better coordinate with signals on Arcadia Street
24. Alameda Street & Arcadia Street
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
    b. Additional green time given to the northbound/southbound phases from eastbound/westbound phases
33. Spring Street & Temple Street
    a. Additional green time given to the northbound/southbound phases from eastbound/westbound phases

The following signal adjustments were made for Alternative 2 in the PM peak hour:

13. Alameda Street & Main Street/Bauchet Street
    a. Additional green time given to the eastbound phase from southbound/northbound phases
19. Alameda Street & Los Angeles Street
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
    b. Additional green time given to the northbound/southbound phases from westbound phase

    c. Eastbound phase eliminated; time allotted to eastbound leg given to northbound/southbound phases

20. Broadway & Arcadia Street
    a. Signal offset adjusted to better coordinate with signals on Arcadia Street
    b. Additional green time given to the northbound/southbound phases from eastbound/westbound phases
22. Main Street & Arcadia Street/28. Main Street & Aliso Street
    a. Additional green time given to the northbound signal at Arcadia Street
    b. Pedestrian crossing time reduced for east/west crossing
    c. Additional green time given to the northbound phase from eastbound/westbound phases
24. Alameda Street & Arcadia Street
    a. Cycle length increased from 90 to 120 seconds based on updated timing plans received from LADOT in fall of 2016
30. Alameda Street & Aliso Street
    a. Cycle length increased from 90 to 120 seconds based on updated timing plans received from LADOT in fall of 2016
    b. Signal offset adjusted to better coordinate with signals on Alameda Street
34. Main Street & Temple Street
    a. Signal offset adjusted to better coordinate with signals on Main Street
    b. Additional green time given to the northbound phase from eastbound/westbound phases
    c. Eastbound protected left-turn phase removed
37. Alameda Street & Temple Street
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
    b. Southbound protected left turn phase removed
    c. Cycle length increased from 90 to 120 seconds
40. Central Avenue & 1st Street
    a. Signal offset adjusted to better coordinate with signals on 1st Street
41. Alameda Street & 1st Street
    a. Signal offset adjusted to better coordinate with signals on 1st Street and Alameda Street
    b. Northside pedestrian “Flash Don’t Walk” time reduced

Future with Alternative 2 Simulation Models

The transportation network changes, traffic volume shifts, and traffic signal optimizations associated with each alternative were used to modify the Future without Project (2029) model, and rerun to assess the transportation performance of the Future with Alternative 2 (2029) scenarios.

Future with Alternative 2 Percent Demand Served

The network changes and signal optimizations improved percent demand served for both project alternatives compared with the Future with Project (2029) scenario. Whereas in the AM peak hour in

the Future with Project (2029) scenario only six intersections served over 95% of demand, this number was 26 in Alternative 2. In the PM peak hour, the Future with Project (2029) scenario also only had six intersections with demand served above 95%. For Alternative 2, this number increased to 12 intersections serving more than 95% of demand.

Percent demand served by intersection are illustrated in Figures 4.2.2-1 and 4.2.2-2 for Alternative 2, in the AM and PM peak hours. These figures also show a visualization of maximum queue lengths at key locations based on visual review of the simulation model runs.

Appendix E contains detailed calculations of percent demand served by intersection.

Future with Alternative 2 Travel Time

Vehicle travel times were recorded using the simulation model in both directions along three corridors:

1. Cesar E. Chavez Avenue from Broadway to Lyon Street
2. Alameda Street from Alhambra Street to Temple Street
3. Los Angeles Street from 1st Street to Alameda Street

Travel time results comparing Future with Project (2029) and Future with Alternative 2 are shown in below in Table 4.2.2-1.

TABLE 4.2.2-1
FUTURE (2029) VEHICLE TRAVEL TIMES

Corridor	Future with Project (2029) Average Travel Time (min:sec)		Future with Alternative 2 (2029) Average Travel Time (min:sec)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Cesar E. Chavez Avenue EB	2:15	4:30	2:30	5:00
Cesar E. Chavez Avenue WB	5:30	8:00	6:15	7:30
Alameda Street NB	7:15	4:15	5:15	4:003:30
Alameda Street SB	9:00	4:15	4:30	4:00
Los Angeles Street NB	3:00	10:30	N/A	N/A
Alameda Street SB	2:15	1:45	N/A	N/A

SOURCE: Fehr & Peers, 2017

Due to intersection geometry changes at the Los Angeles Street & Alameda Street intersection (and the resulting shifts to traffic patterns), the preservation of existing traffic capacity on Arcadia Street (by limiting tour bus parking to off-peak periods only), and the signal optimization changes both project alternatives improve travel times relative to the project at key locations.

The largest changes in travel time from the Future with Project (2029) and Future with Alternative 2 occurs at the following locations during the AM peak hour:

- Alameda Street southbound
- Alameda Street northbound

While Alternative 2 is expected to have substantially improved travel times on Los Angeles Street relative to the Future with Project (2029) scenario, because the full closure of Los Angeles Street in Alternative 2 includes a portion that is included in the calculation of travel time, travel time results are not reported because they would not be comparable as it would be a shorter section of the street.

Transit travel times were recorded in both directions along two corridors using the simulation model:

1. Alameda Street from north of the U.S. 101/ExpressLanes on-ramp to Cesar E. Chavez Avenue
2. Spring Street and Cesar E. Chavez Avenue from Spring Street & Arcadia Street to Cesar E. Chavez Avenue & Alameda Street

Results are shown in Table 4.2.2-2.

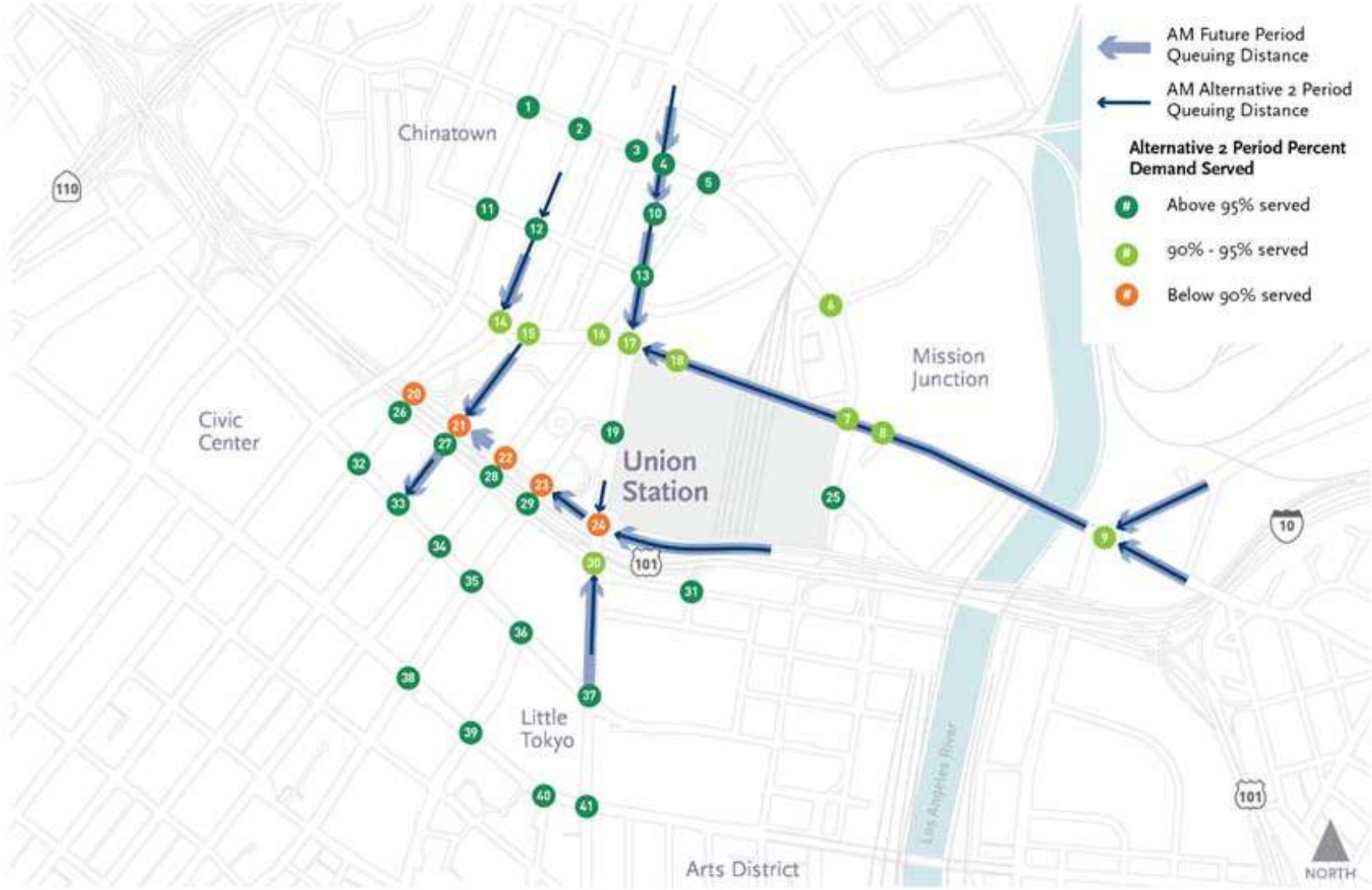
TABLE 4.2.2-2
FUTURE (2029) TRANSIT TRAVEL TIMES

Corridor	Routes Included	Future with Project (2029) Average Travel Time (min:sec)		Future with Alternative 2 (2029) Average Travel Time (min:sec)	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Alameda Street NB	MTA 40, CE 431, Foothill 699, OCTA 701, AVTA 785, CE 534	1:30	1:30	1:15	1:00
Alameda Street SB	MTA 40, OCTA 701	2:00	1:15	1:00	1:15
North Spring Street/ Cesar E. Chavez Avenue NB	MTA 68, MTA 70/71, MTA 728, MTA 733, MTA 745, MTA 78/79, MTA 378, MTA 770	1:45	2:15	1:45	2:15
North Spring Street/ Cesar E. Chavez Avenue SB	MTA 70/71, MTA 78/79, MTA 378, MTA 728, MTA 770	3:00	3:00	2:45	3:00

SOURCE: Fehr & Peers, 2017.

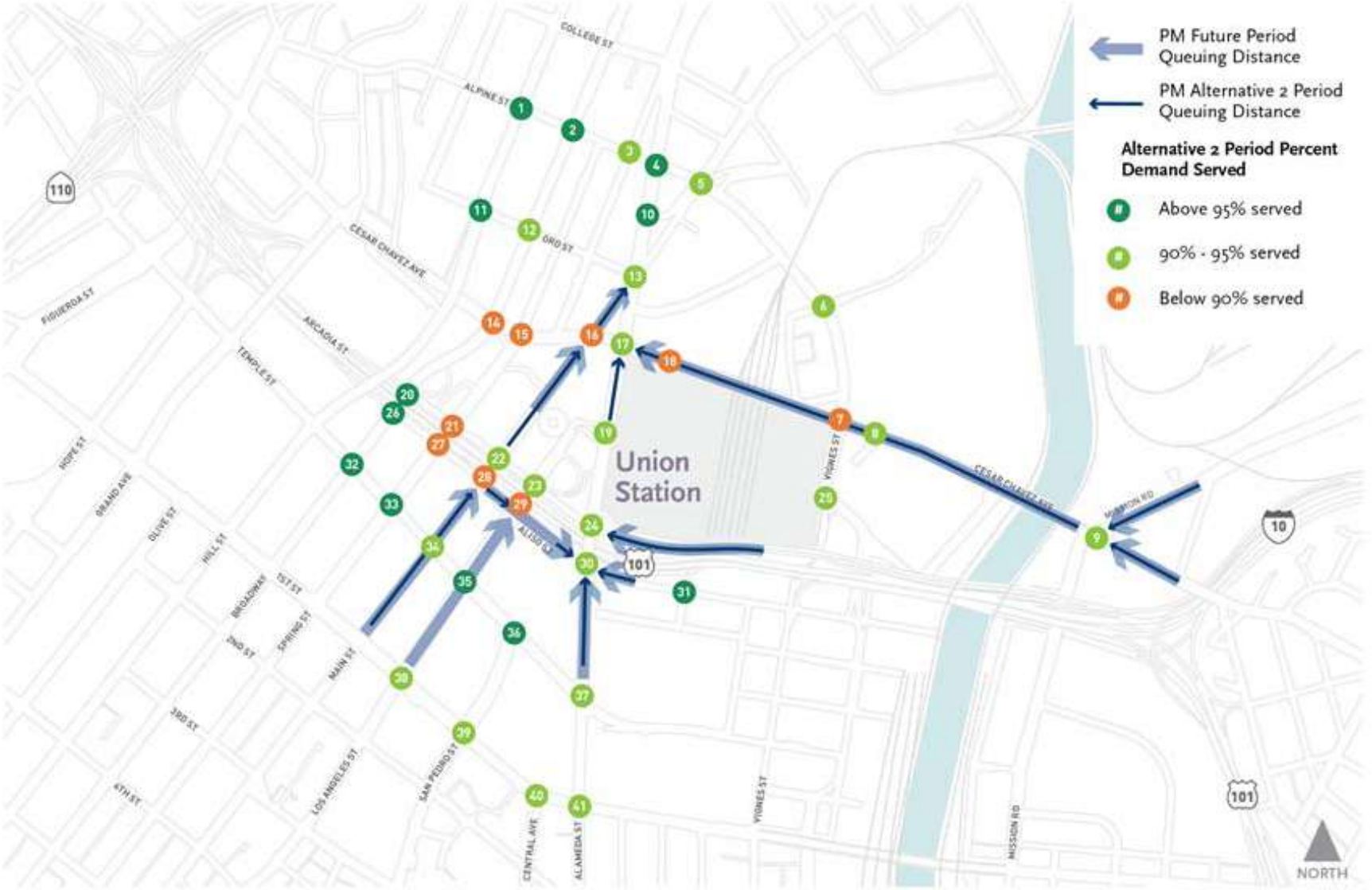
Alternative 2 Impact Analysis

This section assesses potential impacts associated with Alternative 2 and, if necessary, identifies mitigation measures to eliminate or reduce impacts. The methodology implemented in this assessment consists of evaluating whether the project alternative would have significant transportation and traffic impacts according to the thresholds stated in Section 3.6. Impacts are primarily assessed by considering the project objectives and proposed uses in light of the regulatory setting as well as the existing and surrounding uses described above.



Source: Fehr & Peers, 2017

Figure 4.2.2-1. Future with Alternative 2 (2029) AM Peak Hour Percent Demand Served & Queuing



Source: Fehr & Peers, 2017

Figure 4.2.2-2. Future with Alternative 2 (2029) PM Peak Hour Percent Demand Served & Queuing

(a) Will the project result in a substantial disruption to traffic during construction, which could include temporary street closures; temporary loss of regular vehicular or pedestrian access to existing land uses; temporary loss of an existing bus stop or rerouting of bus lines; or creation of traffic hazards?

No significant impacts are expected to occur under these criteria.

Impact Analysis

Construction of the project alternatives is anticipated to have similar activity levels compared with the project, as discussed in Section 3.6. Alternative 2, because it includes a slightly larger area of pedestrian plaza for construction than the project (due to the full closure), could result in a minor increase in construction material haul trips, but any increase is expected to be negligible.

Based on the implementation of the construction management measures, the proposed project will not result in a substantial disruption during the construction phase, and so no significant impact would occur under Impact Criteria 3.6.1.

Mitigation Measures

No mitigation measures are required.

(b) Would the proposed project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?

Significant and unavoidable impacts are expected to occur under this criteria related to intersections and freeway ramps. No other significant impacts are expected to occur under these criteria.

The following section details the impact analysis for the transportation modes identified in the above impact criteria:

Intersections & Streets

Future without Project (2029) Intersection Levels of Service

Future without Project (2029) delay and LOS are unchanged from the values presented in Section 3.6.6.

Future with Alternative 2 (2029) Intersection Levels of Service

Table 4.2.2-3 presents the average delay and LOS for each of the analyzed intersections in the AM and PM peak hours under the Future with Alternative 2 (2029) scenario. As shown, 30 of the 41 study intersections are estimated to operate at LOS D or better during both the AM and PM peak hours, representing a substantial improvement to the number of intersections operating well under this

alternative compared with the project. The following 11 intersections are estimated to operate at LOS E or F, during one or both of the analyzed peak hours:

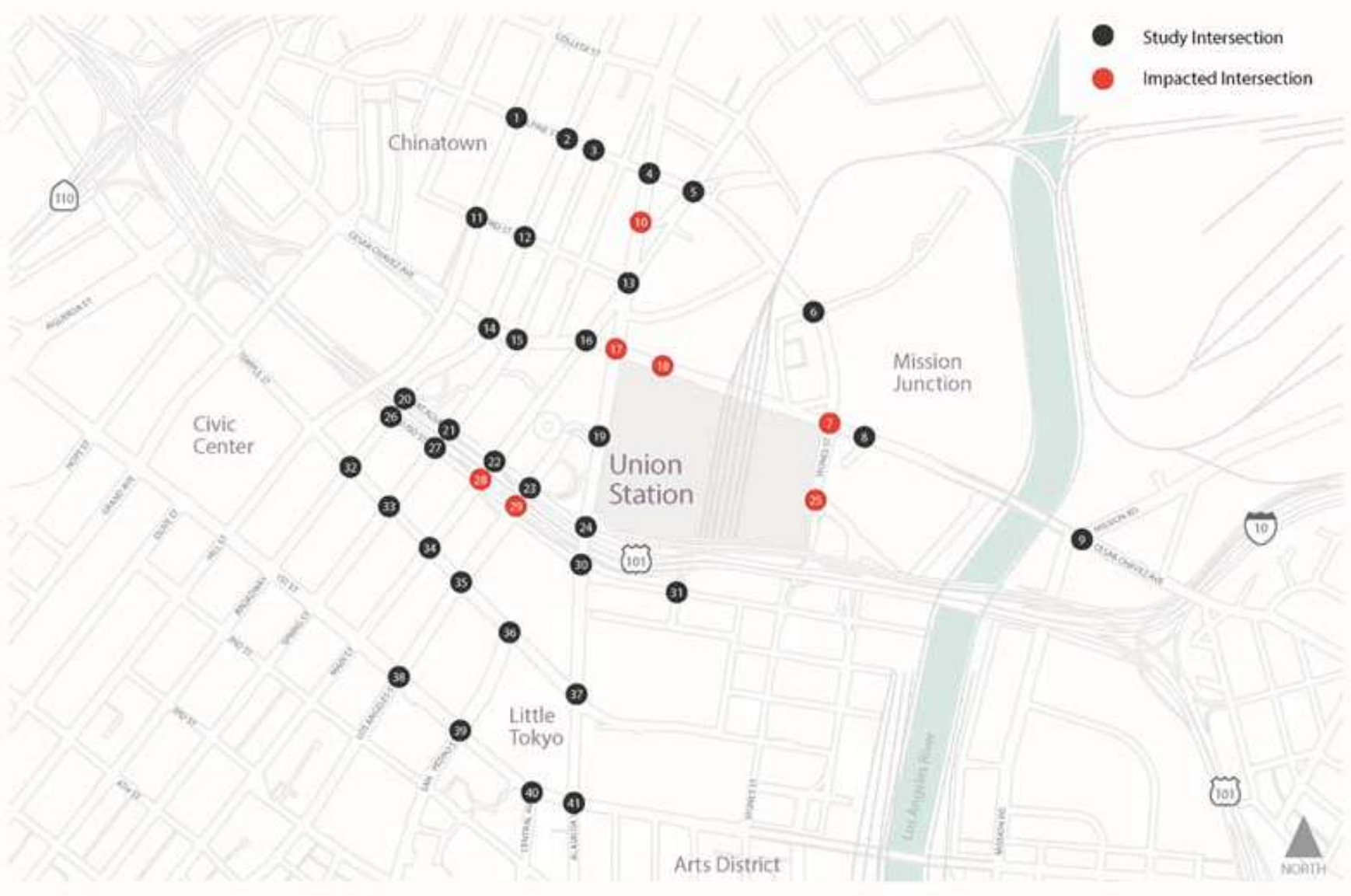
7. Vignes Street & Cesar E. Chavez Avenue
8. Lyon Street & Cesar E. Chavez Avenue
9. Mission Road & Cesar E. Chavez Avenue
14. Broadway & Cesar E. Chavez Avenue
16. Main Street & Cesar E. Chavez Avenue
18. Union Station Driveway & Cesar E. Chavez Avenue
24. Alameda Street & Arcadia Street
25. Vignes Street & Ramirez Street
28. Main Street & Aliso Street
34. Main Street & Temple Street
38. Los Angeles Street & 1st Street

Impact Analysis

As shown in Table 4.2.2-3, applying the criteria for determination of significant impacts used to assess the project, Future with Alternative 2 (2029) scenario would significantly impact nine intersections, a reduction of seven from the project. Figure 4.2.2-3 and 4.2.2-4 illustrate the impact intersection locations in the AM and PM peak hours respectively. The following details the intersections and the peak hours that are expected to be significantly impacted under the Future with Alternative 2 (2029) scenario:

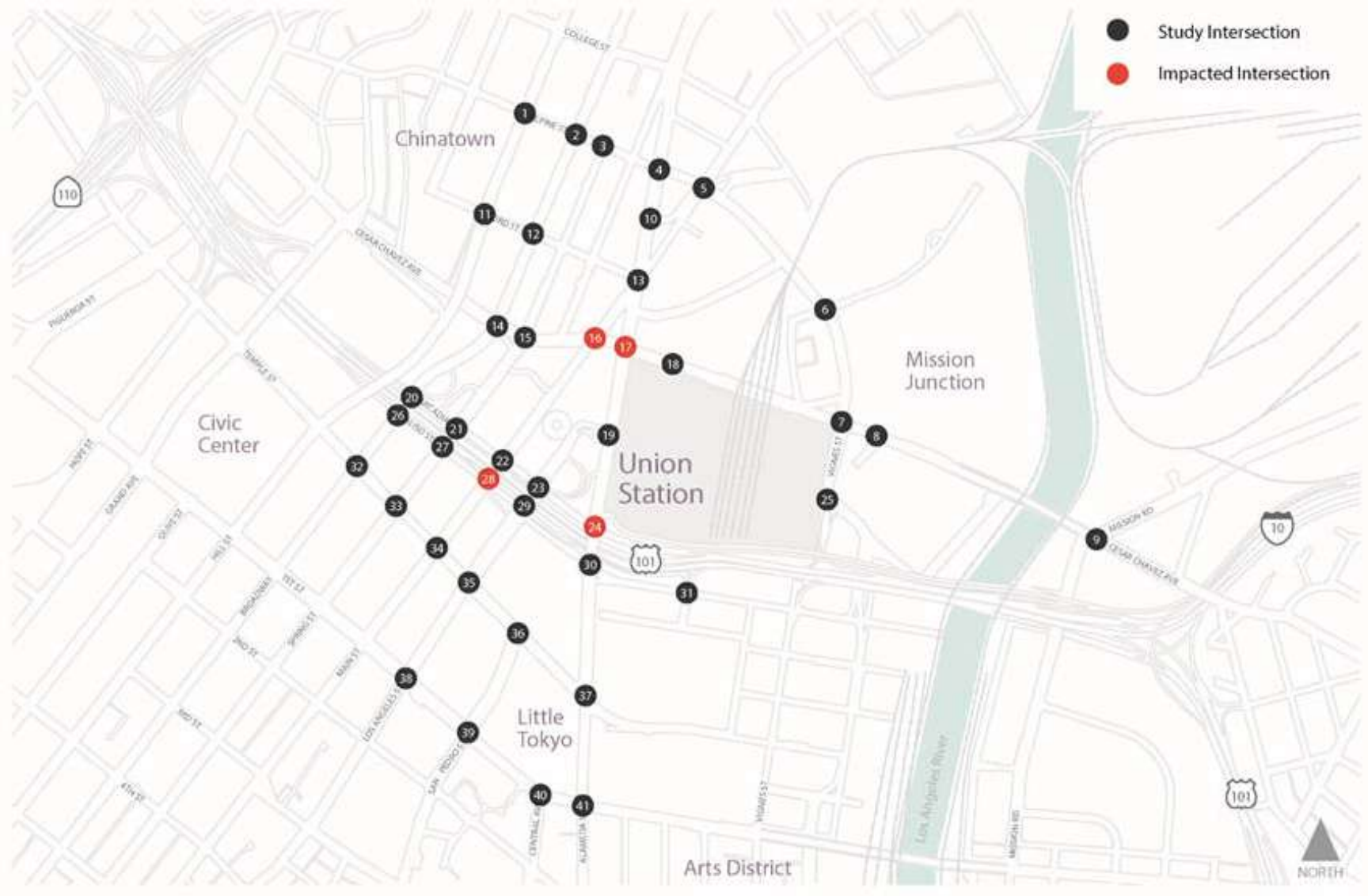
7. Vignes Street & Cesar E. Chavez Avenue (AM)
10. Alhambra Avenue & Alameda Street (AM)
16. North Main Street & Cesar E. Chavez Avenue (PM)
17. Alameda Street & Cesar E. Chavez Avenue (AM & PM)
18. Union Station Driveway & Cesar E. Chavez Avenue (AM)
24. Alameda Street & Arcadia Street (PM)
24. Vignes Street & Ramirez Street/Patsaouras Transit Plaza (AM)
28. North Main Street & Aliso Street (AM & PM)
29. North Los Angeles Street & Aliso Street (AM)

The ultimate number of significant project impacts will depend on the alternative (or combination of alternative elements) that is selected. Due to inconsistency with project objectives, roadway widening, and other traffic capacity mitigation measures are considered infeasible. Therefore, between nine and 16 intersections are expected to have significant and unavoidable project impacts.



Source: Fehr & Peers, 2017

Figure 4.2.2-3. Future with Alternative 2 (2029) Scenario Significant Impacts AM Peak Hour



Source: Fehr & Peers, 2017

Figure 4.2.2-4. Future with Alternative 2 (2029) Scenario Significant Impacts PM Peak Hour

TABLE 4.2.2-3
FUTURE WITH ALTERNATIVE 2 (2029) LOS & IMPACT ANALYSIS

#	N/S Street	E/W Street	Future without Project (2029)				Future with Alternative 2 (2029)							
			AM		PM		AM		PM		AM		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delta	Impact?	Delta	Impact?
1	North Hill Street	Alpine Street	18	B	18	B	18	B	18	B	0	NO	0	NO
2	North Broadway	Alpine Street	24	C	19	B	28	C	19	B	4	NO	0	NO
3	North Spring Street	Alpine Street	25	C	16	B	20	C	16	B	-5	NO	0	NO
4	Alameda Street	Alpine Street	59	E	15	B	49	D	16	B	-10	NO	1	NO
5	North Main Street	Alpine Street/Vignes Street	23	C	31	C	27	C	33	C	4	NO	2	NO
6	Vignes Street	Bauchet Street	10	B	13	B	10	B	13	B	0	NO	0	NO
7	Vignes Street	Cesar E. Chavez Avenue	35	C	62	E	42	D	58	E	7	YES	-4	NO
8	Lyon Street	Cesar E. Chavez Avenue	116	F	120+	F	109	F	120+	F	-7	NO	0	NO
9	Mission Road	Cesar E. Chavez Avenue	120+	F	120+	F	120+	F	116	F	0	NO	-4	NO
10	Alameda Street	Alhambra Avenue	21	C	13	B	41	D	14	B	20	YES	1	NO
11	North Hill Street	Ord Street	14	B	13	B	14	B	13	B	0	NO	0	NO
12	North Broadway	Ord Street	23	C	22	C	24	C	24	C	1	NO	2	NO
13	Alameda Street	Main Street/Bauchet Street	19	B	21	C	21	C	26	C	2	NO	5	NO
14	North Broadway	Cesar E. Chavez Avenue	31	C	68	E	29	C	66	E	-2	NO	-3	NO
15	North Spring Street/New High Street	Cesar E. Chavez Avenue	45	D	36	D	44	D	34	C	-1	NO	-2	NO
16	North Main Street	Cesar E. Chavez Avenue	17	B	47	D	22	C	101	F	5	NO	54	YES
17	Alameda Street	Cesar E. Chavez Avenue	37	D	38	D	47	D	51	D	10	YES	13	YES
18	Union Station Driveway	Cesar E. Chavez Avenue	96	F	112	F	102	F	106	F	6	YES	-6	NO
19	Alameda Street	Los Angeles Street	36	D	31	C	27	C	28	C	-9	NO	-3	NO
20	North Broadway	Arcadia Street	14	B	16	B	14	B	15	B	0	NO	-1	NO
21	North Spring Street	Arcadia Street	50	D	25	C	21	C	20	B	-29	NO	-5	NO
22	North Main Street	Arcadia Street	34	C	20	B	4	A	25	C	-30	NO	5	NO
23	North Los Angeles Street	Arcadia Street	47	D	28	C	12	B	25	C	-35	NO	-3	NO
24	Alameda Street	Arcadia Street/US 101 Off-Ramps	112	F	46	D	80	E	95	F	-32	NO	49	YES
25	Vignes Street	Ramirez Street/Patsaouras Transit Plaza/US 101 Off-Ramps	46	D	88	F	54	D	83	F	8	YES	-5	NO
26	North Broadway	Aliso Street/US 101 Off-Ramps	11	B	54	D	9	A	16	B	-2	NO	-38	NO
27	North Spring Street	Aliso Street	17	B	22	C	11	B	11	B	-6	NO	-11	NO
28	North Main Street	Aliso Street	14	B	51	D	21	C	65	E	7	YES	14	YES
29	North Los Angeles Street	Aliso Street	19	B	52	D	25	C	36	D	6	YES	-16	NO
30	Alameda Street	Aliso Street/Commercial Street	80	E	63	E	44	D	39	D	-36	NO	-25	NO
31	Garey Street/US 101 Off-Ramps	Commercial Street	24	C	32	C	23	C	31	C	-1	NO	-1	NO
32	North Broadway	Temple Street	13	B	69	E	12	B	29	C	-1	NO	-40	NO
33	North Spring Street	Temple Street	30	C	44	D	22	C	35	C	-8	NO	-9	NO
34	North Main Street	Temple Street	25	C	120+	F	23	C	114	F	-2	NO	-6	NO
35	North Los Angeles Street	Temple Street	31	C	60	E	35	C	52	D	4	NO	-8	NO
36	Judge John Aiso Street	Temple Street	15	B	21	C	15	B	22	C	0	NO	1	NO
37	Alameda Street	Temple Street	72	E	41	D	44	D	40	D	-28	NO	-1	NO
38	Los Angeles Street	1st Street	16	B	85	F	15	B	57	E	-1	NO	-28	NO
39	San Pedro Street	1st Street	18	B	29	C	18	B	24	C	0	NO	-5	NO
40	Central Ave	1st Street	14	B	37	D	15	B	35	D	1	NO	-2	NO
41	Alameda Street	1st Street	58	E	20	C	26	C	23	C	-32	NO	3	NO

SOURCE: Fehr & Peers, 2017.

Freeway Analysis

Consistent with the project, LOS and queuing analysis was conducted for the following off-ramps and their respective ramp termini intersections using the simulation model:

- US-101 Northbound Ramps & Ramirez Street
- US-101 Northbound Ramp/Arcadia Street & Alameda Street
- US-101 Northbound Ramps & North Spring Street
- US-101 Southbound Ramps & North Broadway
- US-101 Southbound Ramps & North Los Angeles Street
- US-101 Southbound Ramps & Commercial Street

Impact Analysis

Tables 4.2.2-4 and 4.2.2-5 compare the AM and PM peak hour Future with Alternative 2 (2029) off-ramp queuing relative to the Future with Project (2029) scenario. Under the Future with Alternative 2 (2029) scenario, US-101 Northbound Ramp/Arcadia Street & Alameda Street continues to exceed ramp storage during both AM and PM peak hours. Based on the significant impact criteria detailed in Section 3.6, this impact is considered significant. Average queuing decreases under Alternative 2 in the AM peak hour and increases in the PM peak hour. No other analyzed off-ramps exceed the ramp storage under this scenario.

TABLE 4.2.2-4
FUTURE WITH ALTERNATIVE 2 (2029) OFF-RAMP QUEUING (AM PEAK HOUR)

Ramp / Cross Street	Ramp Length (feet)	Future with Project (2029) AM Peak Hour		Future with Alternative 2 (2029) AM Peak Hour		Exceeds Storage
		Average Queue (feet)	Maximum Queue (feet)	Average Queue (feet)	Maximum Queue (feet)	
US 101 NB Off-Ramp / Ramirez Street	580	25	125	25	125	NO
US 101 NB Off-Ramp / Alameda Street	1,140	1,150[1]	1,150[1]	925	1,150[1]	YES
US 101 NB Off-Ramp / Spring Street	430	0	50	0	50	NO
US 101 SB Off-Ramp / Broadway	480	50	175	50	150	NO
US 101 SB Off-Ramp / Los Angeles Street	470	25	100	25	100	NO
US 101 SB Off-Ramp / Commercial Street	650	50	300	50	300	NO

NOTE: 1 – Queues exceeding the ramp gore point cannot be measured because ramp queues merge with freeway mainline congestion. Queue may exceed reported distance.
SOURCE: Fehr & Peers, 2017

TABLE 4.2.2-5
FUTURE WITH ALTERNATIVE 2 (2029) OFF-RAMP QUEUING (PM PEAK HOUR)

Ramp / Cross Street	Ramp Length (feet)	Future with Project (2029) PM Peak Hour		Future with Alternative 2 (2029) PM Peak Hour		Exceeds Storage
		Average Queue (feet)	Maximum Queue (feet)	Average Queue (feet)	Maximum Queue (feet)	
US 101 NB Off-Ramp / Ramirez Street	580	50	200	50	200	NO
US 101 NB Off-Ramp / Alameda Street	1,140	700	1,150[1]	1,150[1]	1,150[1]	YES
US 101 NB Off-Ramp / Spring Street	430	0	50	0	50	NO
US 101 SB Off-Ramp / Broadway	480	75	250	50	175	NO
US 101 SB Off-Ramp / Los Angeles Street	470	50	250	50	200	NO
US 101 SB Off-Ramp / Commercial Street	650	50	225	50	225	NO

NOTE: 1 – Queues exceeding the ramp gore point cannot be measured because ramp queues merge with freeway mainline congestion. Queue may exceed reported distance.
SOURCE: Fehr & Peers, 2017

Mitigation Measures

Mitigation measures to address off-ramp queue exceedances typically include the following potential strategies:

- Off-ramp widening to provide additional queue storage
- Increase green time for the off-ramp to flush the queue more quickly on to city streets

The impacted off-ramp is physically constrained by the existing bus stop island immediately to the north of the ramp, and by a step grade down to the US-101 southbound lanes south of the ramp. Additionally, widening the off-ramp, which is currently four lanes wide, is considered infeasible because it would be inconsistent with the project's objective to enhance pedestrian and bicycle facilities. Roadway widening to accommodate a fifth off-ramp lane would increase pedestrian crossing distances and exposure to vehicle turning movements. Therefore, no feasible physical mitigation is identified to mitigate this impact.

Increasing green time at this location for the off-ramp would worsen arterial intersection impacts on Alameda Street and connecting streets, because it would take green time away from Alameda Street. Due to the closely-spaced arterial intersections, this further exacerbation of arterial queuing would worsen overall transportation network performance, and is therefore considered infeasible. Therefore, the significant impact is considered significant and unavoidable.

However, to develop concepts to enhance access to, and enhance the performance of, freeway ramps, as well as the safety of pedestrian and bicycle crossings at ramps, Metro, in partnership with the City of Los Angeles and Caltrans, intends to pursue the preparation of a Project Study Report (PSR) to identify if there are any feasible improvements to freeway ramp facilities around Union Station.

Pedestrian & Bicycle Paths

Impact Analysis

The project alternatives will enhance pedestrian and bicycle facilities in the study area by implementing an enhanced crossing across Alameda Street from the station to El Pueblo that will be raised and highly visible, while providing a dedicated crossing area for both pedestrians and cyclists.

The Alameda Esplanade will provide a wide multi-use path along the station's Alameda frontage to facilitate pedestrian and bicycle circulation. The full closure of Los Angeles Street provided in Alternative 2 will increase connectivity between El Pueblo and Father Serra Park, and provide additional dedicated space for biking and walking adjacent to Union Station and El Pueblo.

These project features will substantially enhance pedestrian and bicycle facilities in the study area, and so will have a positive effect on these modes. Therefore, no significant impact is expected.

Mitigation Measures

No mitigation measures are required.

Mass Transit

Impact Analysis

The project alternatives will not affect bus stop locations, or any other transit stop facilities. The following bus transit routes will need to be shifted due to the geometry changes at the Los Angeles Street & Alameda Street intersection associated with each project alternative:

- Big Blue Bus Rapid 10
- LADOT DASH Downtown B
- LADOT Commuter Express 534
- Metro 442

These lines could be shifted from Los Angeles Street to Alameda Street via Aliso Street (northbound buses) under either alternative, or Alameda Street to Los Angeles Street via Arcadia Street (southbound buses) under Alternative 2. This shift will increase the route distance by approximately 500 feet from the existing routing that uses Los Angeles Street, and was included in the microsimulation for Alternative 2. This is expected to have minor effects on transit run time, which can be addressed via periodic transit schedule updates. These lines were shifted in the simulation model, which showed minimal effect on transit runtime. No significant impact is expected with either project alternative.

Mitigation Measures

No mitigation measures are required.

(c) Would the proposed project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Impact Analysis

Consistent with the project, project alternatives are not expected to have any significant impacts to the regional transportation system.

Mitigation Measures

No mitigation measures are required.

(d) Would the proposed project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Impact Analysis

The project alternatives will have no effect on air traffic patterns.

Mitigation Measures

No mitigation measures are required.

(e) Would the proposed project substantially increase hazards to a design feature or incompatible uses?

No significant impacts are expected to occur under these criteria.

Impact Analysis

The project will enhance safety by widening sidewalks to accommodate pedestrians and cyclists, narrow pedestrian crossings, improving pedestrian and cyclist visibility in a high-visibility raised crosswalk, and will slow vehicle travel speeds via the lane repurposing on Alameda Street. Alternative 2 will provide additional space for walking and biking. Therefore, the project alternatives will enhance safety as a result of the project's design features.

Mitigation Measures

No mitigation measures are required.

(f) Would the proposed project result in inadequate emergency access?

No significant impacts are expected to occur under these criteria.

Impact Analysis

The project alternatives will retain access to LAUS on Alameda Street, and El Pueblo via Los Angeles Street, and will not affect any other access locations, so are not expected to impact emergency access consistent with the project. Under Alternative 2, emergency access to El Pueblo will be preserved even with the closure of Los Angeles Street via a mountable curb and removable bollards that will prevent privately operated vehicles from entering the pedestrian plaza, while allowing for physical access of emergency vehicles.

Mitigation Measures

No mitigation measures are required.

(g) Would the proposed project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Impact Analysis

The project alternatives are consistent with the Mobility Plan 2035 network, the ConnectUS Action Plan , and other non-adopted but relevant plans, likethe USMP. They will substantially enhance the safety and capacity of bicycle and pedestrian facilities around the station, and are therefore expected to have a positive impact on these facilities. The existing buffered bike lane on southbound Los Angeles Street will be retained in both project alternatives. With Alternative 2, this bicycle facility would be fully separate from vehicular traffic, since the whole Los Angeles zone would be incorporated into El Pueblo as a pedestrian plaza.

Mitigation Measures

No mitigation measures are required.

Utilities and Service Systems

The Full Closure of Los Angeles Street alternative would include many of the elements described in the project description with the exception of the partial closure of Los Angeles Street. Instead of the partial closure as described, this alternative would have the complete closure. With the complete closure there would be a continuous pedestrian connection between Father Serra Park and El Pueblo, and provide a continuous sidewalk adjacent to Alameda Street. The full closure also provides the potential for a wider crossing area for pedestrians and bicyclists. The Forecourt changes would remain as proposed in the project description. All impacts associated with alternative 2 would be the same as the proposed project and would not result in any impact on utilities.

4.2.3 Alternative 3: Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure)

Aesthetics

Similar to the proposed project, Alternative 3 would result in no impacts to scenic resources within a state scenic highway, visual character/quality, and light/glare, and less than significant impacts to scenic vistas. As with the proposed project, Alternative 3 would result in less than significant impacts to city-designated scenic vistas (unique or historic features) because it would also involve the installation of additional trees along the east sidewalk of Alameda Street where there are no existing street trees which would affect public access to views of unique urban or historic features from park lands and public rights-of-way.

As with the proposed project, Alternative 3 would not affect scenic resources within a state scenic highway due to intervening topography and the project site's location at a distance from eligible or officially designated state scenic highways.

As with the proposed project, Alternative 3 would result in less than significant impacts to visual character because the proposed project would benefit the visual character through creating visual connectivity.

As with the proposed project, Alternative 3 would result in no impacts to light and glare as a result of the installation of new lights and a water feature which would be new source of daytime glare because the project site is already characterized by a high existing level of nighttime light and glare and day and nighttime views would not be affected. Therefore, mitigation would not be required.

Agriculture and Forestry Resources

As with the proposed project, Alternative 3 would have no impacts in regards to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located in or immediately adjacent to the project site. There will be no permanent conversion of land to non-agricultural use due to the proposed project.[10] No change would occur to agriculture and forestry in regards to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use within the project site. Therefore, Alternative 3 would have no impacts in regards to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), and no mitigation would be required.

As with the proposed project, Alternative 3 would have no impacts in regards to Conflict with existing

[10] California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Accessed 26 April 2016. *California Important Farmland Finder.* Available at: http://maps.conservation.ca.gov/ciff/ciff.html

zoning for agricultural use, or a Williamson Act contract. The proposed project area is designated non-enrolled land and not enrolled under a Williamson Act contract. No agricultural uses or related operations are present within the project site or surrounding area. The CDC FMMP has identified the area as Urban and Built-Up Land at the statewide scale and the area has not been surveyed at the County scale. Based on the review of the land use designations and applicable Important Farmland map for the project site, there are no Farmlands located in or immediately adjacent to the project site. No agricultural uses or related operations are present within the project site or surrounding area. Due to its urban setting, the site area is not included in the FMMP. Therefore, Alternative 3 would have no impacts in regards to Conflict with existing zoning for agricultural use, or a Williamson Act contract, and no mitigation would be required.

As with the proposed project, Alternative 3 would have no impacts in regards to conflicting with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). The City of Los Angeles has designated the project site as CR: Regional Commercial, and adjacent properties as HI: Hybrid Industrial Zone to the north, PF: Public Facilities Zones to the east and south, designated as property as owned and used by a government agency, M3: Heavy Industrial Zone to the south, CM: Commercial Manufacturing Zone to the south, and OS: Open Space Zone and PF: Public/Quasi-Public Facilities Zones to the west in both the City's General Plan and Zoning Plan. No areas zoned as any type of forestland located within the proposed project area. The proposed project would not require areas adjacent to the proposed project site to be rezoned. Therefore, Alternative 3 would have no impacts in regards to conflicting with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)), and no mitigation would be required.

As with the proposed project, Alternative 3 would have no impacts in regards to loss of forest land or conversion of forest land to non-forest uses. There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located in or immediately adjacent to the project site. The proposed project is located within an existing designated urban and built-up land area and all construction activities would be undertaken within the existing designated urban and built-up land area. City of Los Angeles General Plan Land Use element and Zoning Ordinance were reviewed to determine the compatibility of the proposed project with adopted land use plans, policies, and regulations. Therefore, Alternative 3 would have no impacts in regards to loss of forest land or conversion of forest land to non-forest uses, and no mitigation would be required.

As with the proposed project, Alternative 3 would have no impacts to agriculture and forestry resources involving other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use. The proposed project is located within an existing designated urban and built-up land area and all construction activities would be undertaken within the existing designated urban and built-up land area. The proposed project would not affect the suitability of any designated farmland for development because the existing land use of the project area would not be changed. There are no forest lands in the

proposed project area. Therefore, Alternative 3 would have no impacts to agriculture and forestry resources involving other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use, and no mitigation would be required.

Air Quality

As with the proposed project, Alternative 3 would result in less than significant impacts with regard to conflicting with or obstructing implementation an applicable air quality plan. Alternative 3 would not substantially change the construction scenario or assumptions. For operation, Alternative 3 would have similar LOS on Alameda Street in the project study area compared to the proposed project.

As with the proposed project, Alternative 3 would result in less than significant impacts with regard to violating any air quality standard or contribute substantially to an existing or projected air quality violation. Alternative 3 would result in a similar construction scenario compared to the proposed project. As shown in the traffic analysis, Alternative 3 would result in similar LOS in the project study area compared to the proposed project. For AM and PM Peak, the intersection of Alameda/Cesar Chavez would remain the same as the cumulative base and cumulative base plus proposed project at LOS D for Alternative 3. For AM Peak, the intersection of Alameda/Los Angeles would improve to LOS C from LOS D (cumulative base) compared to LOS E for the proposed project. For PM Peak, the intersection of Alameda/Los Angeles would remain the same at LOS C (including cumulative base) compared to LOS D with proposed project. For AM Peak, the intersection of Alameda/Arcadia would improve to LOS E from LOS F (including cumulative base and cumulative base plus project). For PM Peak, the intersection of Alameda/Arcadia would worsen from LOS D (including cumulative base) to LOS F, slightly worse than the proposed project which is LOS E.

As with the proposed project, Alternative 3 would result in less than significant impacts with regard to resulting in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors. With a similar construction scenario and similar operational emissions compared to the proposed project, Alternative 3 would have a similar effect on cumulatively considerable net increases of any criteria pollutant.

As with the proposed project, Alternative 3 would result in less than significant impacts with regard to exposing sensitive receptors to substantial pollutant concentrations. The construction scenario and assumptions would be relatively unchanged compared to the proposed project. Sensitive receptors would be no closer or farther to the construction than in the proposed project. Similar to the proposed project, Alternative 3 would not generate any new vehicle trips to the project study area.

As with the proposed project, Alternative 3 would result in less than significant impacts with regard to creating objectionable odors affecting a substantial number of people. The construction scenario and assumptions would be relatively unchanged compared to the proposed project. Odors during operation would be similar to the proposed project.

Greenhouse Gas Emissions

Similar to the proposed project, Alternative 3 would have a less than significant impact on generating GHG emissions, either directly or indirectly, that may have a significant impact on the environment. Alternative 3 would include many of the elements described in the project description but would not allow left hand turns onto Alameda Street from Los Angeles Street. With no change in VMT or the forecourt design compared to the proposed project, Alternative 3 would not generate significant GHG emissions during either construction or operation. Therefore, there would be a less than significant impact.

Similar to the proposed project, Alternative 3 would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. As with the proposed project, Alternative 3 would not conflict with an applicable GHG-related plan, policy, or regulation since emissions from construction, operation, and maintenance would be similar to the proposed project. Alternative 3 would continue to comply to the applicable plans, policies and regulations related to GHG emissions. Therefore, there would be no impact.

Biological Resources

As with the proposed project, Alternative 3 would result in no impacts to candidate, sensitive, or special status species.

As with the proposed project, Alternative 3 would result in no impacts to riparian habitat or other sensitive natural communities.

As with the proposed project, Alternative 3 would result in no impacts to federally protected wetlands.

As with the proposed project, Alternative 3 would result in no impacts to movement of any migratory fish or wildlife species or an established wildlife corridor. As with the proposed project, Alternative 3 would have the potential to result in impacts to biological resources in relation to impeding the use of native wildlife nursery sites. Non-native trees within the project site have the potential to serve as suitable nesting habitat for native bird species afforded protection pursuant to the MBTA. Similar to the proposed project, impacts to nesting birds would be reduced to below the level of significance with the implementation of mitigation measure MM-BIO-1.

As with the proposed project, Alternative 3 would result in no conflicts with any local policies or ordinances.

As with the proposed project, Alternative 3 would result in no conflicts with any HCPs or NCCPs.

Cultural Resources

Similar to the proposed project, Alternative 3 would have the potential to result in significant impacts to historical resources as defined in Section 15064.5(b) of the CEQA Guidelines. Under Alternative 3, all improvements to Alameda, Los Angeles, and Arcadia streets would occur within the City-owned right-of-

way. These streets would continue to convey pedestrian and limited vehicular traffic, and modification of the roadways would not result in a change to setting to Los Angeles Union Station. No property would be acquired in order to construct these improvements; nor would a change of use occur as a result of construction. The partial closure of Los Angeles Street would improve pedestrian connectivity to Los Angeles Union Station, which would be a benefit. Under Alternative 3, these improvements would increase the park-like setting of El Pueblo de Los Angeles and are intended to promote greater use of the State Historic Park.

As with the proposed project, Alternative 3 would require excavation up to 15 feet below ground surface to install project features in areas comprising the existing short-term parking areas; up to 4 feet below ground surface for the Alameda Street, and associated sidewalks improvements; and up to 15 feet below ground surface for tree wells in the sidewalks. This excavation has the potential to encounter previously unrecorded historical resources. As with the proposed project, Alternative 3 would require implementation of MM-CULTURAL-1 and MM-CULTURAL-2 to reduce impacts to historical resources to below the level of significance.

Similar to the proposed project, Alternative 3 would have the potential to result in significant impacts to archaeological resources. Impacts would be the same as for the proposed project. As with the proposed project, Alternative 3 would require implementation of MM-CULTURAL-1 and MM-CULTURAL-2 to reduce impacts to archaeological resources to below the level of significance.

Similar to the proposed project, Alternative 3 would have the potential to result in significant impacts to paleontological resources. Impacts would be the same as for the proposed project. As with the proposed project, excavation under Alternative 3 would not exceed a depth of 15 feet. However, based upon the results of the record search, there is a potential to encounter significant paleontological resources, sites, or unique geological features if excavations extend into older Quaternary deposits. As with the proposed project, Alternative 3 would require implementation of MM-CULTURAL-3 to reduce impacts to paleontological resources to below the level of significance.

Similar to the proposed project, Alternative 3 would have the potential to result in significant impacts to human remains. Impacts would be the same as for the proposed project. As with the proposed project, Alternative 3 would require implementation of MM-CULTURAL-4 to reduce impacts to human remains to below the level of significance.

Similar to the proposed project, Alternative 3 would have the potential to result in significant impacts to tribal cultural resources pursuant to AB 52. Impacts would be the same as for the proposed project. As with the proposed project, Alternative 3 would require implementation of MM-CULTURAL-1 and MM-CULTURAL-2 to reduce impacts to tribal cultural resources to below the level of significance.

Energy

Alternative 2 would not conflict with adopted energy conservation plans and other sustainability metrics in local plans thus resulting in no significant impact. Similarly Alternative 3 would not use energy resources in a wasteful or inefficient manner and would have no significant impacts. Alternative 3 would

not raise nor lower reliance on fossil fuels such as coal, natural gas, or oil thus alternative three would have no significant impact on the project areas reliance on fossil fuels.

Geology and Soils

Alternative 3 would not be vulnerable to a surface fault rupture as no AP delineated faults are located underneath or in the direct vicinity of the study area. As the survey area is not likely to contain areas susceptible to liquefaction, landslides, or expansive soils, Alternative 3 is not likely to be impacted by these hazards. Mitigation measures would not be required for these resources.

Similar to the proposed project, Alternative 3 would be susceptible to strong seismic events due to its proximity to CGS-mapped faults. Impacts would be the same as for the proposed project. Mitigation would not be required to reduce potential impacts below the level of significance. Alternative would require the Contractor to address strong seismic ground shaking in the CMP and identify construction methodologies that would limit the proposed perimeter upgrades vulnerability to earthquake events.

Similar to the proposed project, Alternative 3 would be susceptible to soil loss during construction. Impacts would be the same as for the proposed project. As with the proposed project, under Alternative 3 the construction contractor would be required to incorporate stormwater BMPs consistent with the *California Storm Water Best Management Practice Handbooks: Construction*. This would reduce the potential for soil loss during construction. Mitigation would not be required to reduce potential impacts below the level of significance.

Similar to the proposed project, Alternative 3 could be vulnerable seismic settlement or differential compaction if the placement of deep fills is required. If deep fills are required, alternative may have the potential to increase maintenance, repair, and replacement costs and schedules. Mitigation may be required to reduce potential impacts below the level of significance. Alternative 3 would require the Contractor to address existing soils and fill soils for their stability in the CMP and identify construction methodologies that would limit the proposed perimeter upgrades vulnerability to differential settlement.

Similar to the proposed project, Alternative 3 could be vulnerable to soils corrosive to steel and concrete. If unabated, high soluble sulfate soils and groundwater would corrode and weaken Alternative 3 pavements resulting in potential increases in maintenance, repair, and replacement costs and schedules. Alternative 3 would reduce the vulnerability of project pavements to corrosion from sulfates. This would reduce impacts related to corrosive soils to below the level of significance

Hazards and Hazardous Materials

Impacts and mitigation related to Alternative 3 would be identical to those described for the proposed project. Additionally, Alternative 3, like the proposed project would result in less than significant impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. The proposed project consists of improvements to facilitate alternative transportation, particularly pedestrians and

cyclists, including connections to rail, and bus. The transport, use, and storage of hazardous materials are governed by a range of federal, state, and local statutes and regulations. These improvements would require incidental use of cleaning supplies, fuels, herbicides, and pesticides. Since Metro is a public agency, the use and storage of these materials is regulated by a Business Plan. The application of herbicides and pesticides must be performed under the supervision of a licensed applicator, consistent with the specifications if the Materials Data Safety Sheet. Therefore, there would be less than significant impacts to hazards and hazardous materials related to creating a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Like the proposed project, Alternative 3 would require the implementation of mitigation measures HAZ-1, HAZ-2, HAZ-3, and HAZ-4.

Hydrology and Water Quality

The Restricted Left Hand Turns from Los Angeles alternative would include many of the elements described in the project description but would not allow left hand turns onto Alameda Street from Los Angeles Street. This would mean that only right hand turns (southbound) would be allowed onto Alameda Street. This alternative would change the traffic and pedestrian circulation on and crossing Alameda Street. This alternative would also keep the Forecourt improvements as described in the project description. All impacts associated with alternative 3 would be the same as the proposed project.

Land Use and Planning

Similar to the proposed project, Alternative 3 would result in no impacts with regard to physically dividing an established community, as there would be no new development. Therefore, mitigation would not be required.

Similar to the proposed project, Alternative 3 would result in no impact regard to conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.

Central City Community Plan

Similar to the proposed project, Alternative 2 is consistent with the Central City Community Plan.

Central City North Community Plan

Similar to the proposed project, Alternative 3 is consistent with the CCNCP.

Draft Downtown Community Plan 2040 (DTLA 2040)

Similar to the proposed project, Alternative 3 is consistent with the DTLA 2040.

Alameda District Specific Plan

Similar to the proposed project, Alternative 3 is consistent with the ADP.

SCAG 2016-2040 RTP/SCS

Similar to the proposed project, Alternative 3 is consistent with the SCAG RTP/SCS.

Project Restore Civic Crossroads Plan

Similar to the proposed project, Alternative 3 is consistent with the Project Restore Civic Crossroads Plan.

LADOT Strategic Plan – Great Streets for LA

Similar to the proposed project, Alternative 3 is consistent with the LADOT Strategic Plan – Great Streets for LA.

Los Angeles City Bicycle Plan 2010

Similar to the proposed project, Alternative 3 is consistent with the Los Angeles City Bicycle Plan 2010.

The Connect US Action Plan

Similar to the proposed project, Alternative 3 is consistent with the Connect US Action Plan.

The Connect US Action Plan is a strategy for encouraging people to walk and bicycle to LA Union Station and 1st/Central Regional Connector Station from the historic/cultural neighborhoods that surround them. The proposed project alternative would eliminate vehicle traffic lanes and encourage active forms of transportation, directly helping to achieve the mission of The Connect US Action Plan. Therefore, mitigation would not be required.

Similar to the proposed project, Alternative 3 would result in no impact with regard to conflict with any applicable HCP or NCCP because there are no existing or proposed HCPs or NCCPs that have provisions that are applicable to the proposed project site. Therefore, mitigation would not be required.

Mineral Resources

As with the proposed project, Alternative 3 would have no impacts to mineral resources in regards to the loss of availability of a known mineral resource that would be of value to the region and the residents of the state for the project site. The project site lies within a designated MRZ-3 zone that contains known mineral occurrences of undetermined mineral resource significance. The proposed project site is zoned regional commercial and heavy industrial, and the project site has been developed with structures and is inaccessible for mining extraction. Similar to the proposed project, no loss of availability of a known mineral resource that would be of value to the region and the residents of the state would occur within the project site. Therefore, no mitigation would be required.

As with the proposed project, Alternative 3 would have no impacts to mineral resources in regards to the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. There are no known mineral resource recovery sites of local importance located within the proposed project site. There are no designated active or abandoned mine

sites within the project site.There are no active or abandoned oil fields or extraction facilities on the proposed project site. Similar to the proposed project, project construction is expected to utilize construction aggregate resources from the nearest sand and gravel mine in proximity to the proposed project site. All grading would be balanced within the property limits without the need for import or export from the site. No loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan would occur within the project site. Therefore, no mitigation would be required.

Noise

Construction

As with the proposed project, Alternative 3 would generate temporary increases in noise due to project construction. During each phase of construction the noise level would have the potential to exceed the City of Los Angeles day time noise level 75 dBA at any given hour during day time construction. Construction activities may occur between the hours of 7:00 AM and 6:00 PM Monday through Friday and between the hours of 8:00 AM and 6:00 PM on Saturday. Project design features and BMPs consistent with the City of Los Angeles Municipal Code requirements articulated in Section 112.05 and Section 41.40[11] would be implemented to reduce the temporary increase in noise levels from construction of the proposed project to less than significant levels. The use of temporary noise mufflers barriers and blankets would reduce noise levels for construction equipment by up to 15 dBA[12] Therefore, with the incorporation of project design features and BMPs, Alternative 3 would result in less than significant impacts from noise in relation to exposure or generation of noise levels in excess of established standards, and no mitigation would be required.

Operation

As with the proposed project, Alternative 3 would not result in additional traffic on nearby local access roads to LAUS and would incorporate improvements resulting in road closures and reduced lanes that would reduce noise levels within the project area. Therefore, Alternative 3 would result in less than significant impacts from noise in relation to exposure or generation of noise levels in excess of established standards, and no mitigation would be required.

As with the proposed project, Alternative 3 would result in less than significant impacts to noise in relation to generation of excessive ground-borne vibration or ground-borne noise. As a result of the construction, operation, and maintenance of the proposed project, no groundborne vibration would occur. The proposed project reduces the number of travel lanes and does not add capacity to existing roadways. Groundborne vibration from vehicular traffic rarely causes a disturbance within buildings located in urban environments unless the pavement surface is uneven, or the receptor is highly sensitive

[11] City of Los Angeles Municipal Code. n.d. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

[12] U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

(e.g., a scientific research establishment) to groundborne vibration. Therefore, Alternative 3 would not result in significant impacts to noise, and no mitigation would be required.

As with the proposed project, Alternative 3 would result in less than significant impacts to noise in relation to permanent increases in ambient noise levels as a result of operation and maintenance of the proposed project. The operation of the proposed project would not increase noise over existing exterior levels within in the project area. The proposed project improvements will not add additional traffic on nearby local access roads to LAUS. Nearby buildings would not experience a change in noise levels during the operation of the project. Therefore, Alternative 3 would result in less than significant impacts to noise in relation to permanent increases in ambient noise levels as a result of operation and maintenance of the proposed project, and no mitigation would be required.

As with the proposed project, Alternative 3 would result in less than significant impacts in regards to noise related to temporary or periodic increases in ambient noise levels. The construction of the proposed project would require four phases of construction: demolition, site preparation, grading and paving (including striping/new configuration on Alameda and Los Angeles St). Noise would be produced by the operation of heavy-duty equipment. Construction noise levels were estimated using FTA guidance (FTA, 2006), which provides a method for calculating noise levels for the two noisiest pieces of equipment operating in each construction phase using reference noise levels for individual pieces of equipment. Full power operation for a time-period of one hour was assumed because more construction equipment operates continuously for periods of one hour or more at some point in the construction period. No ground effects were considered. The closest receptors are the Mosaic Apartments and La Plaza Park, which are within 50 feet of where construction would be occurring. During each phase of construction the noise level would have the potential to exceed the City of Los Angeles day time noise level 75 dBA at any given hour during day time construction (Table 3.13.3-1, *Construction Equipment by Phase with Associated Maximum 1-hr L_{eq}*). Project design features and BMPs consistent with the City of Los Angeles Municipal Code requirements articulated in Section 112.05 and Section 41.40[13] would be implemented to reduce the temporary increase in noise levels from construction of the proposed project to less than significant levels. The use of temporary noise mufflers barriers and blankets would reduce noise levels for construction equipment by up to 15 dBA[14] Therefore, impacts to noise related to temporary or periodic increases in ambient noise levels from Alternative 3 would be less than significant, and no mitigation is required.

As with the proposed project, Alternative 3 would not result in impacts to noise in relation to public airports. The project area is outside of the LAX airport noise contour. The proposed project will not generate operational noise levels that would increase the noise within the existing environment. Therefore, Alternative 3 would not result in exposure to people residing or working in the project area to excessive noise levels associated with public airports or public use airports.

[13] City of Los Angeles Municipal Code. n.d. Available at: http://www.amlegal.com/codes/client/los-angeles_ca/

[14] U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

As with the proposed project, Alternative 3 would not result in impacts to noise in relation to private airstrips. The project site is not located within the vicinity of a private airstrip. The nearest private airstrip, Goodyear Blimp Base Airport, is located approximately 14 miles southwest of the project site. Therefore, Alternative 3 would not result in exposure to people residing or working in the project area to excessive noise levels associated with private airstrips.

Population and Housing

As with the proposed project, Alternative 3 would result in no impacts regarding population growth and displacement of people and no impacts regarding displacement of housing. Alternative 3 would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. Alternative 3 would result in no indirect impacts in regard to population growth because, although Alternative 3 would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, it would not involve major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth.[15] There is no housing within the project site, and no housing units would be removed due to Alternative 3. Alternative 3 would not be anticipated to directly displace people as there is no permanent population residing within the project site. A few temporary encampments were observed during site reconnaissance along Arcadia Street adjacent to the project site and on a few of the freeway bridges crossing SR-101 to the south of the project site. However, because these are unauthorized encampments, those individuals could be asked to leave whether or not the project is developed. Therefore, no mitigation would be required.

As with the proposed project, Alternative 3 would result in no impacts regarding population growth and displacement of people and no impacts regarding displacement of housing. Alternative 3 would result in no direct impacts in regard to population growth because it would not involve the construction of new housing units or businesses. Alternative 3 would result in no indirect impacts in regard to population growth because, although Alternative 3 would improve the convenience of accessing transit facilities at Los Angeles Union Station from the project vicinity, it would not involve major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth.[16] There is no housing within the project site, and no housing units would be removed due to Alternative 3. Alternative 3 would not be anticipated to directly displace people as there is no permanent population residing within the project site. As a few temporary encampments were observed during site reconnaissance along Arcadia Street adjacent to the project site and on a few of the freeway bridges crossing SR-101 to the south of the project site, there is a potential for small number of people to be indirectly displaced as a result of the increase in pedestrian traffic from the proposed improvements. However, because these

[15] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

[16] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

are unauthorized encampments, those individuals could be asked to leave whether or not the project is developed. Therefore, no mitigation would be required.

Public Services

As with the proposed project, Alternative 3 would have no impacts to fire protection services for the project site because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate increased fire protection services requiring the need for new or substantially altered fire engine or fire truck stations. Similar to the proposed project, Alternative 3 is intended to serve existing and anticipated residents, workers, visitors, and transit population and would incorporate a construction traffic management plan to reduce potential project construction impacts on the delivery of fire protection services. The construction traffic management plan would outline adequate measures to ensure emergency vehicle access during all aspects of project construction. No reduction of Fire Department personnel, equipment or apparatus access, fire lanes, or fire hydrants in or near the project site will take place due to the construction and operation of the proposed project. Emergency response times are not anticipated to differ from current response times. Therefore, no mitigation would be required.

As with the proposed project, Alternative 3 would have no impacts to police protection services for the project site because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate increased police protective services requiring the need for new or substantially altered police stations or substations. Similar to the proposed project, Alternative 3 has been designed to incorporate security provisions and features pursuant to the City of Los Angeles General Plan and LAPD's Design Out Crime Guidelines including lighting at night near the Forecourt and Esplanade Plaza, security to mitigate for any increased security risks due to additional foot traffic, controlled access to buildings, and illumination of public and semipublic spaces to minimize opportunities for criminal activity, therefore reducing the demands placed upon police protection services. The service ratio of 10 sworn officers per 1,000 residents for the Central Area Community Police Station service area consistent with the provisions established in the security element of the City of Los Angeles General Plan and Alameda District Specific Plan. Therefore, no mitigation would be required.

As with the proposed project, Alternative 3 would have no impacts to schools and educational services for the project site because there would be no increase in residents within the proposed project area that would necessitate the need for new or substantially altered schools. Alternative 3 would not involve the construction of new housing units or businesses and, therefore, would not increase demand for schools or educational facilities. The proposed project is a nonresidential use and would therefore not directly generate school-age children. Therefore, no mitigation would be required.

As with the proposed project, Alternative 3 would result in a net increase in publicly accessible open space in regard to parks for the project site. Alternative 3 would not involve the construction of new housing units or businesses and, therefore, would not increase demand for parks or recreational facilities. There is no housing within the project site. There is no existing recreation use within the

project site. Similar to the proposed project, Alternative 2 includes the construction of a new civic plaza, including installation of fountains, within the footprint of the existing paved short-term parking lot within the project site, which is already developed and heavily graded. Therefore, no mitigation would be required.

As with the proposed project, Alternative 3 would have no impacts to other facilities including libraries and hospitals serving the project site, because there would be no increase in residents, workers, or visitors to the proposed project area that would necessitate the need for new or substantially altered libraries or hospitals. Alternative 3 is intended to serve existing and anticipated residents, workers, visitors, and transit population. Alternative 3 would not involve the construction of new housing units or businesses and, therefore, would not increase demand for libraries or hospitals serving the project site. Therefore, no mitigation would be required.

Recreation

As with the proposed project, Alternative 3 would result in no impacts regarding increased use of recreational facilities or construction of new or expanded recreational facilities which might have an adverse physical effect on the environment. Alternative 3 would result in no impacts in regard to recreation because, although Alternative 3 would improve the convenience of accessing recreational facilities in the project vicinity via Los Angeles Union Station similar to the proposed project, it would not involve major infrastructure system extensions (such as roads, highways, bridges, utility lines, major drainage improvements, or grading) which would make accessible a previously inaccessible area to support population growth.[17] There is no recreation use within the project site, and the replacement of an existing paved parking lot with a civic plaza would result in no adverse physical effects on the environment. Therefore, no mitigation is required.

Transportation and Traffic

Alternative 3 Transportation Network & Traffic Projections

The intersection of Los Angeles Street & Alameda Street currently allows all turning movements except for northbound left turns. The project includes the consolidation of the east/west pedestrian crossing at one location, with signal protection, meaning no turning vehicles will conflict with the pedestrian crossing while the phase is active. Traffic phases that do not conflict could overlap with the pedestrian crossing.

Based on the analysis detailed in Section 3.6, the project will increase queuing on Los Angeles Street, especially during the PM peak hour, and is expected to impact operations in other parts of the network. Prohibiting the eastbound left turn from northbound Los Angeles Street onto northbound Alameda Street, which is the heaviest movement at the eastbound approach in the PM peak hour, would reduce

[17] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

queuing on Los Angeles Street relative to the project, and has the potential to improve overall operations in the network.

Vehicles that had been turning left are expected to take other streets within the network, and redistribution of these vehicle volumes is discussed in more detail below. The elimination of the eastbound left turn at this intersection would also improve operations, as green time previously given to the eastbound left turn can be redistributed to northbound and southbound vehicles on Alameda Street. Bus parking on Arcadia Street would be prohibited during peak periods in this alternative to maintain existing vehicle capacity.

Future with Alternative 3 (2029) Traffic Volumes

Alternative 3 is not anticipated to generate new trips, but with the prohibition of the eastbound left turns from Los Angeles Street onto Alameda Street, all vehicles that would make this movement under the Future with Project scenario are assumed to divert their trips to other corridors in the network. Based on the most direct routes, as well as a visual review of the simulation model to assess congestion, the following rerouting assumptions were incorporated into the analysis of Alternative 3:

- In the AM peak hour, all trips making the diverted movement would shift to Alameda Street. Vehicles that had been traveling up Los Angeles Street and turning on Alameda Street would instead turn onto Aliso Street and then to Alameda Street to continue north.
- In the PM peak hour, all trips making the diverted movement are assumed to redistribute using the following pattern:
    - 65% diverted onto Alameda Street
    - 25% diverted onto North Main Street
    - 10% diverted onto Broadway

Vehicles in the PM peak hour are expected to redistribute to multiple corridors because the PM peak hour eastbound left movement is much higher than the AM peak hour, and Alameda Street alone is not expected to have sufficient capacity to serve all rerouted traffic volumes. Because such diversion would free up capacity on Los Angeles Street, vehicle volumes were further adjusted to account for shifts in background traffic volumes from other corridors onto Los Angeles Street for vehicles accessing the U.S. 101 on-ramps on Los Angeles Street.

Traffic volume shifts for Alternative 3 are illustrated in Appendix E.

Project Alternative Signal Optimization: Future with Alternative 3 (2029)

Alternative 3 also includes optimization of signal timing at several intersections as part of the project, in order to account for the re-assignment and the new configuration at Los Angeles Street & Alameda Street. The following signal adjustments were made for Future with Alternative 3 (2029) scenario in the AM peak hour:

5. Alameda Street & Alpine Street
    a. Signal offset adjusted to better coordinate with signals on Alameda Street

11. Alameda Street & Alhambra Avenue
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
14. Alameda Street & Main Street/Bauchet Street
    a. Additional green time given to the northbound/southbound phases from eastbound/westbound phases
    b. Signal offset adjusted to better coordinate with signals on Alameda Street
18. Main Street & Cesar Chavez Avenue
    a. Additional green time given to the eastbound/westbound phases from northbound/southbound phases
19. Alameda Street & Cesar Chavez Avenue
    a. Additional green time given to the eastbound/westbound phases from northbound/southbound phases
20. Alameda Street & Los Angeles Street
    a. Additional green time given to the northbound/southbound phases from eastbound/westbound phases
25. Spring Street & Arcadia Street/27. Spring Street & Aliso Street
    a. Cycle length increased from 70 to 90 seconds to be consistent with other intersections on the corridors
    b. Additional green time given to the northbound/southbound phases
    c. Additional green time given to the southbound signal at Aliso Street
    d. Additional green time given to the westbound phase
    e. Reduced green time given to eastbound phase
26. Main Street & Arcadia Street/28. Main Street & Aliso Street
    a. Cycle length increased from 70 to 90 seconds to be consistent with other intersections on the corridors
    b. Signal offset adjusted to better coordinate with signals on Arcadia Street
27. Los Angeles Street & Arcadia Street/29. Los Angeles Street & Aliso Street
    b. Signal offset adjusted to better coordinate with signals on Arcadia Street
28. Alameda Street & Arcadia Street
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
    b. Additional green time given to the northbound/southbound phases from eastbound/westbound phases
34. Spring Street & Temple Street
    a. Additional green time given to the northbound/southbound phases from eastbound/westbound phases

The following signal adjustments were made for the Alternative 3 scenario in the PM peak hour:

14. Alameda Street & Main Street/Bauchet Street
    a. Additional green time given to the eastbound phase from southbound/northbound phases

21. Alameda Street & Los Angeles Street
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
    b. Additional green time given to the northbound/southbound phases from eastbound/westbound phases
22. Broadway & Arcadia Street
    a. Signal offset adjusted to better coordinate with signals on Arcadia Street
    b. Additional green time given to the northbound/southbound phases from eastbound/westbound phases
23. Main Street & Arcadia Street/28. Main Street & Aliso Street
    a. Additional green time given to the northbound signal at Arcadia Street
    b. Pedestrian crossing time reduced for east/west crossing
    c. Additional green time given to the northbound phase from eastbound/westbound phases
25. Alameda Street & Arcadia Street
    a. Cycle length increased from 90 to 120 seconds based on updated timing plans received from LADOT in fall of 2016
31. Alameda Street & Aliso Street
    a. Cycle length increased from 90 to 120 seconds based on updated timing plans received from LADOT in fall of 2016
    b. Signal offset adjusted to better coordinate with signals on Alameda Street
35. Main Street & Temple Street
    a. Signal offset adjusted to better coordinate with signals on Main Street
    b. Additional green time given to the northbound phase from eastbound/westbound phases
    c. Eastbound protected left-turn phase removed
38. Alameda Street & Temple Street
    a. Signal offset adjusted to better coordinate with signals on Alameda Street
    b. Southbound protected left turn phase removed
    c. Cycle length increased from 90 to 120 seconds
42. Central Avenue & 1st Street
    a. Signal offset adjusted to better coordinate with signals on 1st Street
43. Alameda Street & 1st Street
    a. Signal offset adjusted to better coordinate with signals on 1st Street and Alameda Street
    b. Northside pedestrian “Flash Don’t Walk” time reduced

Future with Alternative 3 Simulation Models

The transportation network changes, traffic volume shifts, and traffic signal optimizations associated with each alternative were used to modify the Future without Project (2029) model, and rerun to assess the transportation performance of the Future with Alternative 3 (2029) scenarios.

Future with Alternative 3 Percent Demand Served

The network changes and signal optimizations improved percent demand for Alternative 3 compared with the Future with Project (2029) scenario. Whereas in the AM peak hour in the Future with Project (2029) scenario only six intersections served over 95% of demand, this number was 22 in Alternative 3. In the PM peak hour, the Future with Project (2029) scenario also had six intersections with demand served above 95%. This dropped further in Alternative 3 to three intersections.

Percent demand served by intersection are illustrated in Figures 4.2.3-1 and 4.2.3-2 for Alternative 3, in the AM and PM peak hours. These figures also show a visualization of maximum queue lengths at key locations based on visual review of the simulation model runs.

Appendix E contains detailed calculations of percent demand served by intersection.

Future with Alternative 3 Travel Time

Vehicle travel times were recorded using the simulation model in both directions along three corridors:

4. Cesar E. Chavez Avenue from Broadway to Lyon Street
5. Alameda Street from Alhambra Street to Temple Street
6. Los Angeles Street from 1st Street to Alameda Street

Travel time results comparing Future with Project (2029) and Future with Alternative 3 are shown in below in Table 4.2.3-1.

TABLE 4.2.3-1
FUTURE (2029) VEHICLE TRAVEL TIMES

Corridor	Future with Project (2029) Average Travel Time (min:sec)		Future with Alternative 3 (2029) Average Travel Time (min:sec)	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Cesar E. Chavez Avenue EB	2:15	4:30	2:30	5:00
Cesar E. Chavez Avenue WB	5:30	8:00	6:30	7:45
Alameda Street NB	7:15	4:15	5:154:30	4:00
Alameda Street SB	9:00	4:15	4:305:15	3:30
Los Angeles Street NB	3:00	10:30	3:30	3:00
Alameda Street SB	2:15	1:45	2:15	1:30

SOURCE: Fehr & Peers, 2017.

Due to intersection geometry changes at the Los Angeles Street & Alameda Street intersection (and the resulting shifts to traffic patterns), the preservation of existing traffic capacity on Arcadia Street (by limiting tour bus parking to off-peak periods only), and the signal optimization changes both project alternatives improve travel times relative to the project at key locations.

The largest changes in travel time from the Future with Project (2029) and Future with Alternative 3 scenarios occur at the following locations during the AM peak hour:

- Alameda Street southbound
- Alameda Street northbound

During the PM peak hour the largest reduction in travel time would occur on Los Angeles Street northbound for Alternative 3.

Transit travel times were recorded in both directions along two corridors using the simulation model. Results are shown in Table 4.2.3-2.

3. Alameda Street from north of the U.S. 101/ExpressLanes on-ramp to Cesar E. Chavez Avenue
4. Spring Street and Cesar E. Chavez Avenue from Spring Street & Arcadia Street to Cesar E. Chavez Avenue & Alameda Street

TABLE 4.2.3-2
FUTURE (2029) TRANSIT TRAVEL TIMES

Corridor	Routes Included	Future with Project (2029) Average Travel Time (min:sec)		Future with Alternative 3 (2029) Average Travel Time (min:sec)	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Alameda Street NB	MTA 40, CE 431, Foothill 699, OCTA 701, AVTA 785, CE 534	1:30	1:30	1:15	1:00
Alameda Street SB	MTA 40, OCTA 701	2:00	1:15	1:15	1:15
North Spring Street/ Cesar E. Chavez Avenue NB	MTA 68, MTA 70/71, MTA 728, MTA 733, MTA 745, MTA 78/79, MTA 378, MTA 770	1:45	2:15	1:45	2:15
North Spring Street/ Cesar E. Chavez Avenue SB	MTA 70/71, MTA 78/79, MTA 378, MTA 728, MTA 770	3:00	3:00	2:45	3:00

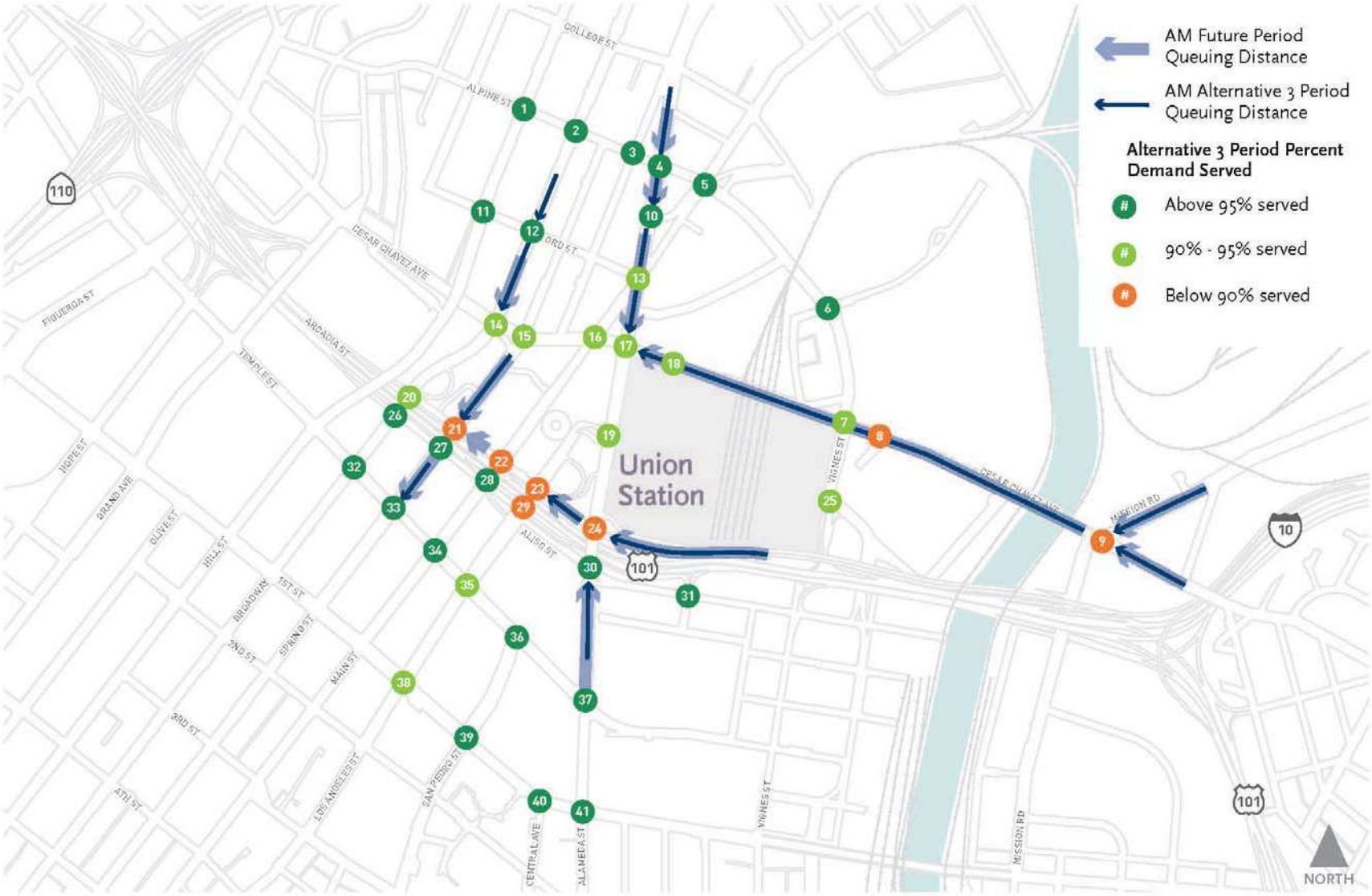
SOURCE: Fehr & Peers, 2017

Alternative 3 Impact Analysis

This section assesses potential impacts associated with the project alternatives and, if necessary, identifies mitigation measures to eliminate or reduce impacts. The methodology implemented in this assessment consists of evaluating whether the project alternatives would have significant transportation and traffic impacts according to the thresholds stated in Section 3.6. Impacts are primarily assessed by considering the project objectives and proposed uses in light of the regulatory setting as well as the existing and surrounding uses described above.

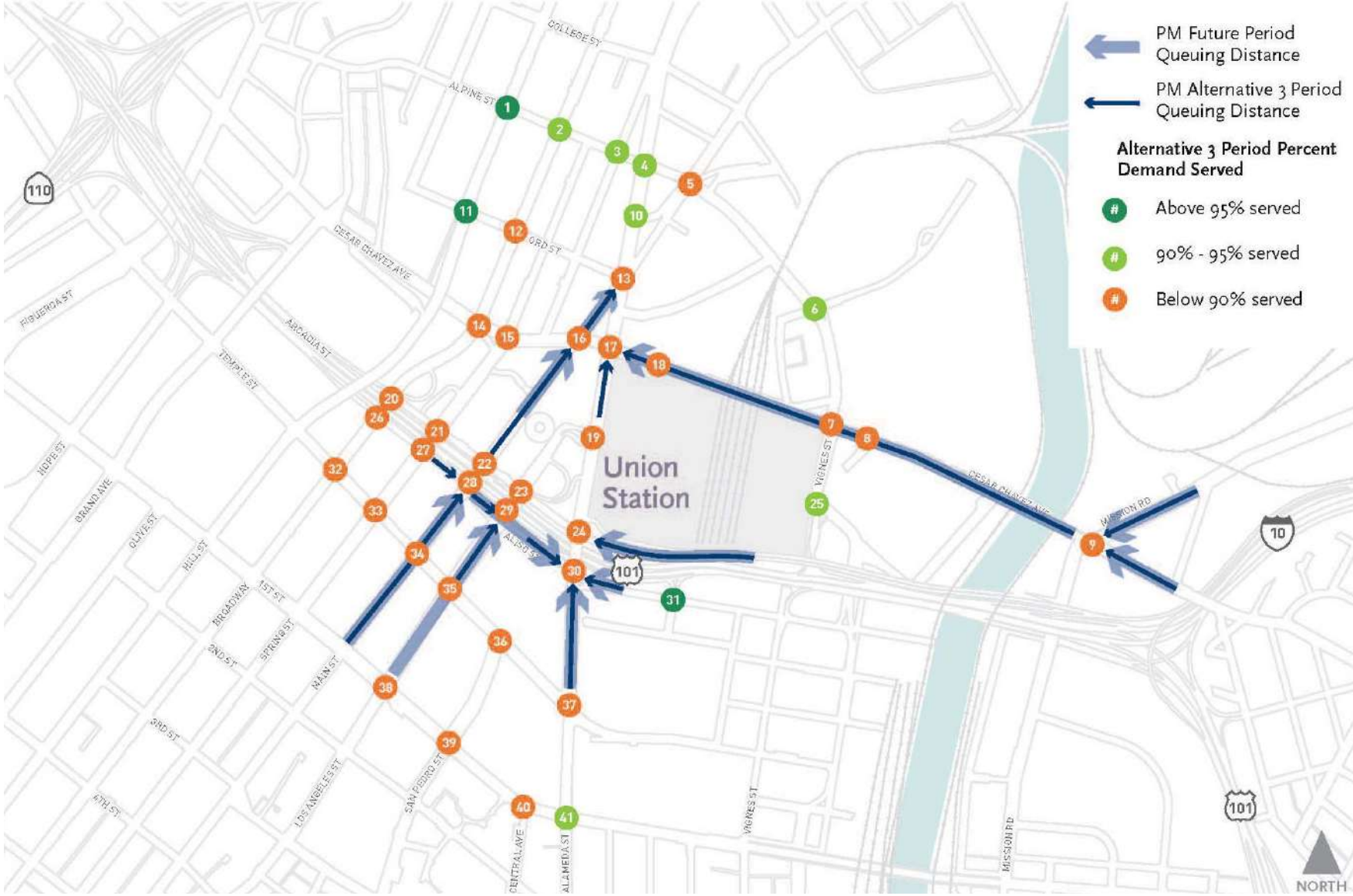
(a) Will the project result in a substantial disruption to traffic during construction, which could include temporary street closures; temporary loss of regular vehicular or pedestrian access to existing land uses; temporary loss of an existing bus stop or rerouting of bus lines; or creation of traffic hazards?

No significant impacts are expected to occur under these criteria.



Source: Fehr & Peers, 2017

Figure 4.2.3-1. Future and Alternative 3 AM: Queuing Distance & Intersection Demand Served



Source: Fehr & Peers, 2017

Figure 4.2.3-2. Future and Alternative 3 PM: Queuing Distance & Intersection Demand Served

Impact Analysis

Construction of the project alternatives is anticipated to have similar activity levels compared with the project, as discussed in Section 3.6. Alternative 3 is expected to have little if any difference in construction activity levels.

Based on the implementation of the construction management measures, the proposed project will not result in a substantial disruption during the construction phase, and so no significant impact would occur under Impact Criteria 3.6.1.

Mitigation Measures

No mitigation measures are required.

(b) Would the proposed project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?

Significant and unavoidable impacts are expected to occur under this criteria related to intersections and freeway ramps. No other significant impacts are expected to occur under these criteria.

The following section details the impact analysis for the transportation modes identified in the above impact criteria:

Intersections & Streets

Future without Project (2029) Intersection Levels of Service

Future without Project (2029) delay and LOS are unchanged from the values presented in Section 3.6.6.

Future with Alternative 3 (2029) Intersection Levels of Service

Table 4.2.3-3 presents the average delay and LOS for each of the analyzed intersections in the AM and PM peak hours under the Future with Alternative 3 (2029) scenario. As shown, 14 of the 41 study intersections are estimated to operate at LOS D or better during both the AM and PM peak hours, compared with 22 in the Future with Project (2029). The following 27 intersections are estimated to operate at LOS E or F, during one or both of the analyzed peak hours:

4. Alameda Street & Alpine Street
5. North Vignes Street & Cesar E. Chavez Avenue
8. Lyon Street & Cesar E. Chavez Avenue
9. Mission Road & Cesar E. Chavez Avenue
10. Alameda Street & Alhambra Avenue
14. Broadway & Cesar E. Chavez Avenue
15. North Spring Street & Cesar E. Chavez Avenue

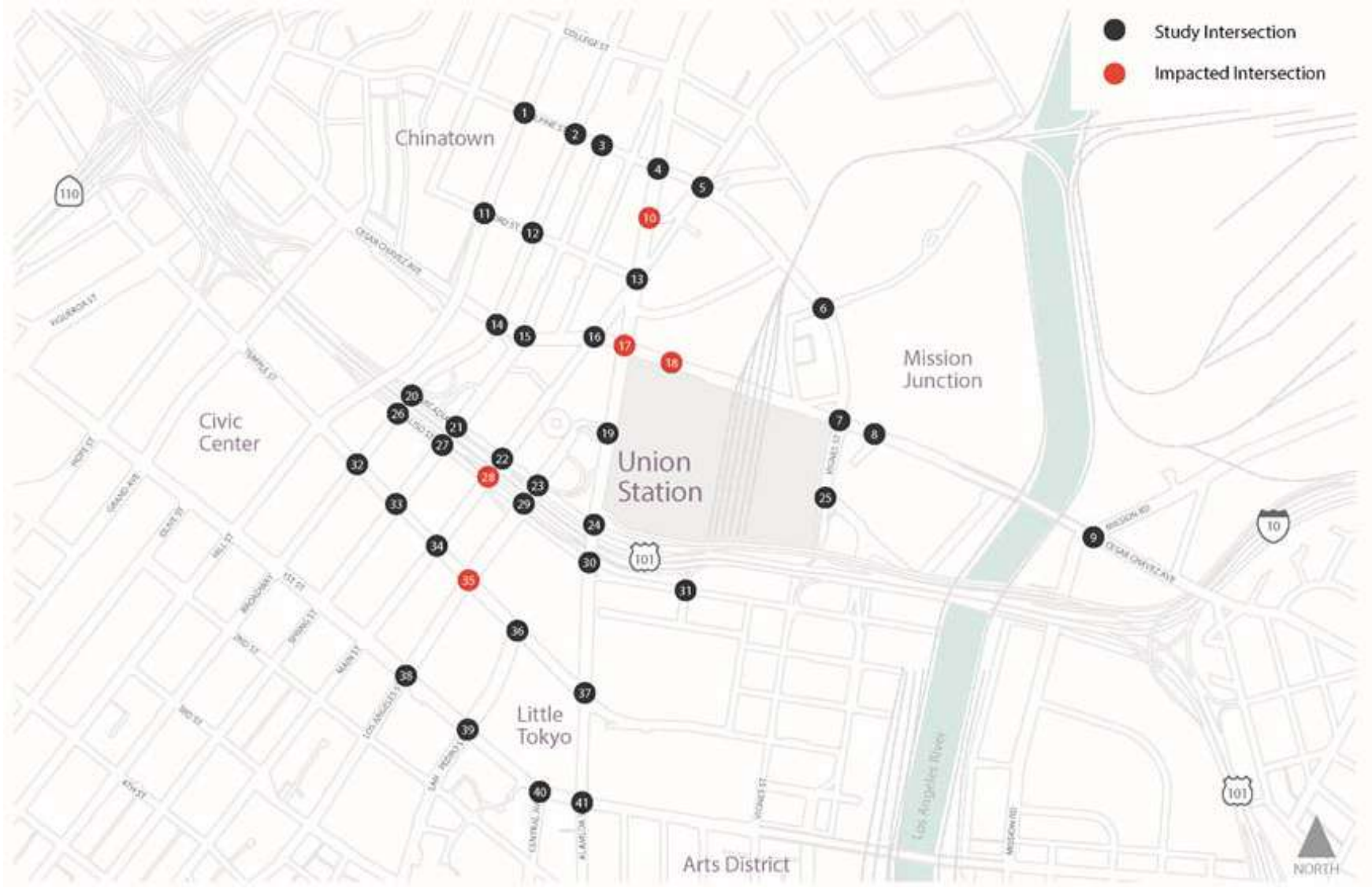
16. North Main Street & Cesar E. Chavez Avenue
17. Alameda Street & Cesar E. Chavez Avenue
18. Union Station Driveway & Cesar E. Chavez Avenue
20. Broadway & Arcadia Street
21. North Spring Street & Arcadia Street
23. North Los Angeles Street & Arcadia Street
24. Alameda Street & Arcadia Street
25. North Vignes Street & Ramirez Street
26. Broadway & Aliso Street
27. North Spring Street & Aliso Street
28. North Main Street & Aliso Street
29. North Los Angeles Street & Aliso Street
30. Alameda Street & Aliso Street
32. Broadway & West Temple Street
33. North Spring Street & West Temple Street
34. North Main Street & Temple Street
35. North Los Angeles & East Temple Street
36. South San Pedro Street & East Temple Street
37. Alameda Street & Temple Street
38. North Los Angeles & East 1st Street

Impact Analysis

As shown in Table 4.2.3-3, applying the criteria for determination of significant impacts used to assess the project, the Future with Alternative 3 (2029) scenario would significantly impact 11 intersections, a reduction of five from the project. Figure 4.2.3-3 and 4.2.3-4 illustrate the impact intersection locations in the AM and PM peak hours, respectively.

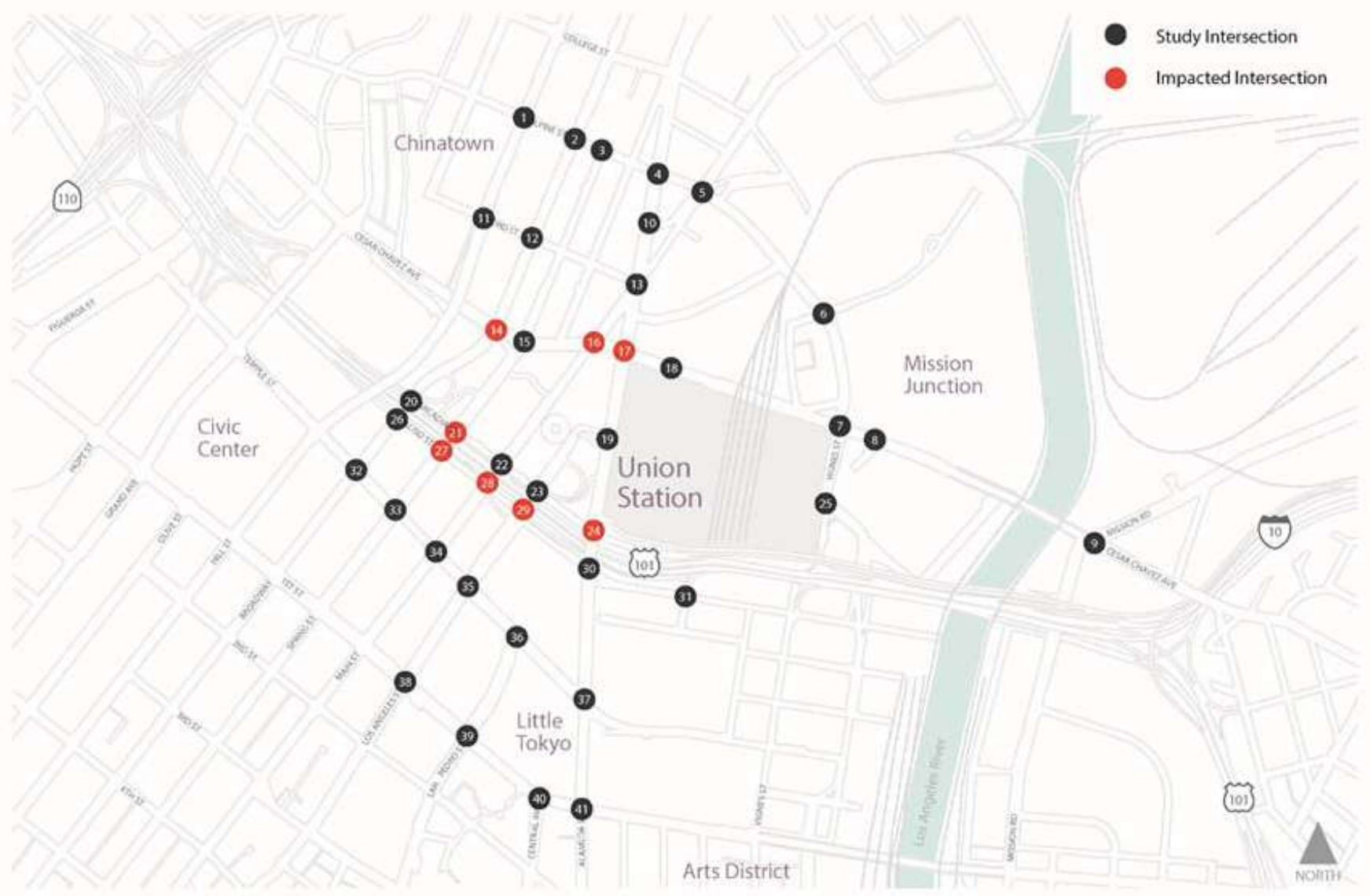
The following details the intersections and the peak hours that are expected to be significantly impacted under the Future with Alternative 3 (2029) scenario:

10. Alameda Street & Alhambra Avenue (AM)
12. North Broadway & Cesar E. Chavez Avenue (PM)
16. North Main Street & Cesar E. Chavez Avenue (PM)
17. Alameda Street & Cesar E. Chavez Avenue (AM & PM)
18. Union Station Driveway & Cesar E. Chavez Avenue (AM)
21. North Spring Street & Arcadia Street (PM)
25. Alameda Street & Arcadia Street (PM)
27. North Spring Street & Aliso Street (PM)
28. North Main Street & Aliso Street (AM & PM)
29. North Los Angeles Street & Aliso Street (PM)
35. North Los Angeles Street & Temple Street (AM)



Source: Fehr & Peers, 2017

Figure 4.2.3-3. Future with Alternative 3 (2029) Scenario Significant Impacts AM Peak Hour



Source: Fehr & Peers, 2017

Figure 4.2.3-4. Future with Alternative 3 (2029) Scenario Significant Impacts PM Peak Hour

TABLE 4.2.3-3
FUTURE WITH ALTERNATIVE 3 (2029) LOS & IMPACT ANALYSIS

#	N/S Street	E/W Street	Future without Project (2029)				Future with Alternative 3 (2029)							
			AM		PM		AM		PM		AM		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delta	Impact?	Delta	Impact?
1	North Hill Street	Alpine Street	18	B	18	B	18	B	18	B	0	NO	0	NO
2	North Broadway	Alpine Street	24	C	19	B	25	C	20	B	1	NO	1	NO
3	North Spring Street	Alpine Street	25	C	16	B	20	B	18	B	-5	NO	2	NO
4	Alameda Street	Alpine Street	59	E	15	B	61	E	16	B	2	NO	1	NO
5	North Main Street	Alpine Street/Vignes Street	23	C	31	C	24	C	34	C	1	NO	3	NO
6	Vignes Street	Bauchet Street	10	B	13	B	11	B	13	B	1	NO	0	NO
7	Vignes Street	Cesar E. Chavez Avenue	35	C	62	E	36	D	56	E	1	NO	-6	NO
8	Lyon Street	Cesar E. Chavez Avenue	116	F	120+	F	114	F	108	F	-2	NO	-12	NO
9	Mission Road	Cesar E. Chavez Avenue	120+	F	120+	F	120+	F	108	F	0	NO	-12	NO
10	Alameda Street	Alhambra Avenue	21	C	13	B	57	E	13	B	36	YES	0	NO
11	North Hill Street	Ord Street	14	B	13	B	14	B	14	B	0	NO	1	NO
12	North Broadway	Ord Street	23	C	22	C	21	C	25	C	-2	NO	3	NO
13	Alameda Street	Main Street/Bauchet Street	19	B	21	C	23	C	27	C	4	NO	6	NO
14	North Broadway	Cesar E. Chavez Avenue	31	C	68	E	28	C	74	E	-3	NO	6	YES
15	North Spring Street/New High Street	Cesar E. Chavez Avenue	45	D	36	D	46	D	37	D	1	NO	1	NO
16	North Main Street	Cesar E. Chavez Avenue	17	B	47	D	22	C	109	F	5	NO	62	YES
17	Alameda Street	Cesar E. Chavez Avenue	37	D	38	D	43	D	50	D	6	YES	12	YES
18	Union Station Driveway	Cesar E. Chavez Avenue	96	F	112	F	100	F	106	F	4	YES	-6	NO
19	Alameda Street	Los Angeles Street	36	D	31	C	34	C	28	C	-2	NO	-3	NO
20	North Broadway	Arcadia Street	14	B	16	B	15	B	18	B	1	NO	2	NO
21	North Spring Street	Arcadia Street	50	D	25	C	21	C	39	D	-29	NO	14	YES
22	North Main Street	Arcadia Street	34	C	20	B	4	A	18	B	-30	NO	-2	NO
23	North Los Angeles Street	Arcadia Street	47	D	28	C	10	B	20	B	-37	NO	-8	NO
24	Alameda Street	Arcadia Street/US 101 Off-Ramps	112	F	46	D	76	E	86	F	-36	NO	40	YES
25	Vignes Street	Ramirez Street/Patsaouras Transit Plaza/US 101 Off-Ramps	46	D	88	F	44	D	79	E	-2	NO	-9	NO
26	North Broadway	Aliso Street/US 101 Off-Ramps	11	B	54	D	12	B	37	D	1	NO	-17	NO
27	North Spring Street	Aliso Street	17	B	22	C	11	B	79	E	-6	NO	57	YES
28	North Main Street	Aliso Street	14	B	51	D	20	C	99	F	6	YES	48	YES
29	North Los Angeles Street	Aliso Street	19	B	52	D	21	C	60	E	2	NO	8	YES
30	Alameda Street	Aliso Street/Commercial Street	80	E	63	E	35	C	49	D	-45	NO	-14	NO
31	Garey Street/US 101 Off-Ramps	Commercial Street	24	C	32	C	24	C	31	C	0	NO	-1	NO
32	North Broadway	Temple Street	13	B	69	E	12	B	26	C	-1	NO	-43	NO
33	North Spring Street	Temple Street	30	C	44	D	21	C	32	C	-9	NO	-12	NO
34	North Main Street	Temple Street	25	C	120+	F	22	C	119	F	-3	NO	-1	NO
35	North Los Angeles Street	Temple Street	31	C	60	E	38	D	48	D	7	YES	-12	NO
36	Judge John Aiso Street	Temple Street	15	B	21	C	17	B	20	B	2	NO	-1	NO
37	Alameda Street	Temple Street	72	E	41	D	40	D	34	C	-32	NO	-7	NO
38	Los Angeles Street	1st Street	16	B	85	F	16	B	46	D	0	NO	-39	NO
39	San Pedro Street	1st Street	18	B	29	C	17	B	25	C	-1	NO	-4	NO
40	Central Ave	1st Street	14	B	37	D	14	B	34	C	0	NO	-3	NO
41	Alameda Street	1st Street	58	E	20	C	25	C	23	C	-33	NO	3	NO

SOURCE: Fehr & Peers, 2017.

Freeway Analysis

Consistent with the project, LOS and queuing analysis was conducted for the following off-ramps and their respective ramp termini intersections using the simulation model:

- US-101 Northbound Ramps & Ramirez Street
- US-101 Northbound Ramp/Arcadia Street & Alameda Street
- US-101 Northbound Ramps & North Spring Street
- US-101 Southbound Ramps & North Broadway
- US-101 Southbound Ramps & North Los Angeles Street
- US-101 Southbound Ramps & Commercial Street

Impact Analysis

Tables 4.2.3-4 and 4.2.3-5 compare the AM and PM peak hour Future with Alternative 3 (2029) off-ramp queuing relative to the Future with Project (2029) scenario. Under the Future with Alternative 3 (2029) scenario, the US-101 Northbound Ramp/Arcadia Street & Alameda Street continues to exceed ramp storage under both AM and PM peak hour. Based on the significant impact criteria detailed in Section 3.6, this impact is considered significant. Average queuing decreases under Alternative 3 in the AM peak hour and increases in the PM peak hour. No other analyzed off-ramps exceed the ramp storage under this scenario.

TABLE 4.2.3-4
FUTURE WITH ALTERNATIVE 3 (2029) OFF-RAMP QUEUING (AM PEAK HOUR)

Ramp / Cross Street	Ramp Length (feet)	Future with Project (2029) AM Peak Hour		Future with Alternative 3 (2029) AM Peak Hour		Exceeds Storage
		Average Queue (feet)	Maximum Queue (feet)	Average Queue (feet)	Maximum Queue (feet)	
US 101 NB Off-Ramp / Ramirez Street	580	25	125	25	125	NO
US 101 NB Off-Ramp / Alameda Street	1,150	1,150[1]	1,150[1]	875	1,150[1]	YES
US 101 NB Off-Ramp / Spring Street	430	0	50	0	50	NO
US 101 SB Off-Ramp / Broadway	480	50	175	50	175	NO
US 101 SB Off-Ramp / Los Angeles Street	470	25	100	25	100	NO
US 101 SB Off-Ramp / Commercial Street	650	50	300	50	275	NO

NOTE: 1 – Queues exceeding the ramp gore point cannot be measured because ramp queues merge with freeway mainline congestion. Queue may exceed reported distance.
SOURCE: Fehr & Peers, 2017

TABLE 4.2.3-5
FUTURE WITH ALTERNATIVE 3 (2029) OFF-RAMP QUEUING (PM PEAK HOUR)

Ramp / Cross Street	Ramp Length (feet)	Future with Project (2029) PM Peak Hour		Future with Alternative 3 (2029) PM Peak Hour		Exceeds Storage
		Average Queue (feet)	Maximum Queue (feet)	Average Queue (feet)	Maximum Queue (feet)	
US 101 NB Off-Ramp / Ramirez Street	580	50	200	50	250	NO
US 101 NB Off-Ramp / Alameda Street	1,150	700	1,150[1]	1,050	1,150[1]	YES
US 101 NB Off-Ramp / Spring Street	430	0	50	0	50	NO
US 101 SB Off-Ramp / Broadway	480	75	250	100	300	NO
US 101 SB Off-Ramp / Los Angeles Street	470	50	250	50	150	NO
US 101 SB Off-Ramp / Commercial Street	650	50	225	50	250	NO

NOTE: 1 – Queues exceeding the ramp gore point cannot be measured because ramp queues merge with freeway mainline congestion. Queue may exceed reported distance.
SOURCE: Fehr & Peers, 2017

Mitigation Measures

Mitigation measures to address off-ramp queue exceedances typically include the following potential strategies:

- Off-ramp widening to provide additional queue storage
- Increase green time for the off-ramp to flush the queue more quickly on to city streets

The impacted off-ramp is physically constrained by the existing bus stop island immediately to the north of the ramp, and by a step grade down to the US-101 southbound lanes south of the ramp. Additionally, widening the off-ramp, which is currently four lanes wide, is considered infeasible because it would be inconsistent with the project's objective to enhance pedestrian and bicycle facilities. Roadway widening to accommodate a fifth off-ramp lane would increase pedestrian crossing distances and exposure to vehicle turning movements. Therefore, no feasible physical mitigation is identified to mitigate this impact.

Increasing green time at this location for the off-ramp would worsen arterial intersection impacts on Alameda Street and connecting streets, because it would take green time away from Alameda Street. Due to the closely-spaced arterial intersections, this further exacerbation of arterial queuing would worsen overall transportation network performance, and is therefore considered infeasible. Therefore, the significant impact is considered significant and unavoidable.

However, to develop concepts to enhance access to, and enhance the performance of, freeway ramps, as well as the safety of pedestrian and bicycle crossings at ramps, Metro, in partnership with the City of Los Angeles and Caltrans, intends to pursue the preparation of a Project Study Report (PSR) to identify if there are any feasible improvements to freeway ramp facilities around Union Station.

Pedestrian & Bicycle Paths

Impact Analysis

The project alternatives will enhance pedestrian and bicycle facilities in the study area by implementing an enhanced crossing across Alameda Street from the station to El Pueblo that will be raised and highly visible, while providing a dedicated crossing area for both pedestrians and cyclists.

The Alameda Esplanade will provide a wide multi-use path along the station's Alameda frontage to facilitate pedestrian and bicycle circulation. These project features will substantially enhance pedestrian and bicycle facilities in the study area, and so will have a positive effect on these modes. Therefore, no significant impact is expected.

Mitigation Measures

No mitigation measures are required.

Mass Transit

Impact Analysis

The project alternatives will not affect bus stop locations, or any other transit stop facilities. The following bus transit routes will need to be shifted due to the geometry changes at the Los Angeles Street & Alameda Street intersection associated with each project alternative:

- Big Blue Bus Rapid 10
- LADOT DASH Downtown B
- LADOT Commuter Express 534
- Metro 442

Northbound runs on these lines could be shifted from Los Angeles Street to Alameda Street via Aliso Street (northbound buses) under either alternative. Southbound buses under Alternative 3 will not need to be shifted. No significant impact is expected with either project alternative.

Mitigation Measures

No mitigation measures are required.

(c) Would the proposed project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No significant impacts are expected to occur under these criteria.

Impact Analysis

Consistent with the project, project alternatives are not expected to have any significant impacts to the regional transportation system.

Mitigation Measures

No mitigation measures are required.

(d) Would the proposed project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No significant impacts are expected to occur under these criteria.

Impact Analysis

The project alternatives will have no effect on air traffic patterns.

Mitigation Measures

No mitigation measures are required.

(e) Would the proposed project substantially increase hazards to a design feature or incompatible uses?

No significant impacts are expected to occur under these criteria.

Impact Analysis

The project will enhance safety by widening sidewalks to accommodate pedestrians and cyclists, narrow pedestrian crossings, improving pedestrian and cyclist visibility in a high-visibility raised crosswalk, and will slow vehicle travel speeds via the lane repurposing on Alameda Street. Therefore, the project alternatives will enhance safety as a result of the project's design features.

Mitigation Measures

No mitigation measures are required.

(f) Would the proposed project result in inadequate emergency access?

No significant impacts are expected to occur under these criteria.

Impact Analysis

The project alternatives will retain access to LAUS on Alameda Street, and El Pueblo via Los Angeles Street, and will not affect any other access locations, so are not expected to impact emergency access consistent with the project.

Mitigation Measures

No mitigation measures are required.

(g) Would the proposed project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No significant impacts are expected to occur under these criteria.

Impact Analysis

The project alternatives are consistent with the Mobility Plan 2035 network, the ConnectUS Action Plan, and other non-adopted but relevant plans, likethe USMP. They will substantially enhance the safety and capacity of bicycle and pedestrian facilities around the station, and are therefore expected to have a positive impact on these facilities. The existing buffered bike lane on southbound Los Angeles Street will be retained in both project alternatives. In Alternative 2, this bicycle facility would be fully separate from vehicular traffic, since the whole Los Angeles zone would be incorporated into El Pueblo as a pedestrian plaza.

Mitigation Measures

No mitigation measures are required.

Utilities and Service Systems

The Restricted Left Hand Turns from Los Angeles alternative would include many of the elements described in the project description but would not allow left hand turns onto Alameda Street from Los Angeles Street. This would mean that only right hand turns (southbound) would be allowed onto Alameda Street. This alternative would change the traffic and pedestrian circulation on and crossing Alameda Street. This alternative would also keep the Forecourt improvements as described in the project description. All impacts associated with alternative 3 would be the same as the proposed project and would not result in any impact on utilities.

4.3 Environmentally Superior Alternative

This section of the analysis provides a comparison between the proposed project and the three alternatives.

For each environmental resource area, a summary is provided of the results of the analysis for the significance thresholds considered for each of the environmental issues areas (Table 4.3-1, *Analysis of Comparative Level of Impact of Proposed Project and Alternatives*).

Alternative 1, the No Project Alternative, is the environmentally superior alternative. Pursuant to Section 15126.6(e)(2) of the State CEQA Guidelines, if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the feasible action alternatives. Of the feasible action alternatives, both Alternative 2, Full Closure of Los Angeles Street, and Alternative 3, Restricted Left Hand Turns would result in lesser impacts to transportation and traffic than the proposed project. Alternative 2 is expected to significantly impact 9 intersections, compared with 16 for the project, while Alternative 3 is expected to impact 11 intersections. Accordingly, Alternative 2 is the environmentally superior alternative. However, Alternative 2 has more AM peak hour significant impacts compared with Alternative 3, but fewer PM peak hour significant impacts compared with Alternative 3, so each alternative has benefits over the other during either the AM or PM peak.

TABLE 4.3-1

ANALYSIS OF COMPARATIVE LEVEL OF IMPACT OF PROPOSED PROJECT AND ALTERNATIVES

(Better, Similar, or Worse Compared to the Proposed Project)

CEQA Issue Area	Proposed Project Impact Summary	Alternative 1: No Project Alternative	Alternative 2: Full Closure of Los Angeles Street	Alternative 3: Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure)
Aesthetics (4 issue areas)	a. Less than significant impact b. No impact c. Less than significant impact d. No impact	a. No impact b. No impact c. No Impact d. No impact	a. Less than significant impact b. No impact c. Less than significant impact d. No impact	a. Less than significant impact b. No impact c. Less than significant impact d. No impact
Agriculture and Forestry Resources (5 issue areas)	a. No impact b. No impact c. No impact d. No impact e. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact
Air Quality (5 issue areas)	a. Less than significant impact b. Less than significant impact c. Less than significant impact d. Less than significant impact e. Less than significant impact	a. No impact b. No impact c. No impact d. No impact e. No impact	a. Less than significant impact b. Less than significant impact c. Less than significant impact d. Less than significant impact e. Less than significant impact	a. Less than significant impact b. Less than significant impact c. Less than significant impact d. Less than significant impact e. Less than significant impact
Greenhouse Gas Emissions (2 issue areas)	a. Less than significant impact b. No impact	a. No impact b. No impact	a. Less than significant impact b. No impact	a. Less than significant impact b. No impact
Biological Resources (6 issue areas)	a. No impact b. No impact c. No impact d. Less than significant impact after mitigation e. No impact f. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact	a. No impact b. No impact c. No impact d. Less than significant impact after mitigation e. No impact f. No impact	a. No impact b. No impact c. No impact d. Less than significant impact after mitigation e. No impact f. No impact
Cultural Resources (5 issue areas)	a. Less than significant impact after mitigation b. Less than significant impact after mitigation c. Less than significant impact after mitigation d. Less than significant impact after mitigation e. Less than significant impact after mitigation	a. No impact b. No impact c. No impact d. No impact e. No impact	a. Less than significant impact after mitigation b. Less than significant impact after mitigation c. Less than significant impact after mitigation d. Less than significant impact after mitigation e. Less than significant impact after mitigation	a. Less than significant impact after mitigation b. Less than significant impact after mitigation c. Less than significant impact after mitigation d. Less than significant impact after mitigation e. Less than significant impact after mitigation
Energy (3 issue areas)	a. No impact b. Less than significant impact c. Less than significant impact	a. No impact b. No impact c. No impact	a. No impact b. Less than significant impact c. Less than significant impact	a. No impact b. Less than significant impact c. Less than significant impact
Geology and Soils (8 issue areas)	a(i). No impact a(ii). Less than significant impact a(iii). Less than significant impact a(iv). No impact b. Less than significant impact c. Less than significant impact d. Less than significant impact e. No impact	a(i). No impact a(ii). No impact a(iii). No impact a(iv). No impact b. No impact c. No impact d. No impact e. No impact	a(i). No impact a(ii). Less than significant impact a(iii). Less than significant impact a(iv). No impact b. Less than significant impact c. Less than significant impact d. Less than significant impact e. No impact	a(i). No impact a(ii). Less than significant impact a(iii). Less than significant impact a(iv). No impact b. Less than significant impact c. Less than significant impact d. Less than significant impact e. No impact

TABLE 4.3-1
ANALYSIS OF COMPARATIVE LEVEL OF IMPACT OF PROPOSED PROJECT AND ALTERNATIVES
(Better, Similar, or Worse Compared to the Proposed Project)

CEQA Issue Area	Proposed Project Impact Summary	Alternative 1: No Project Alternative	Alternative 2: Full Closure of Los Angeles Street	Alternative 3: Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure)
Hazards and Hazardous Materials (8 issue areas)	a. Less than significant impact b. Less than significant impact after mitigation c. Less than significant impact after mitigation d. No impact e. No impact f. No impact g. No impact h. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact g. No impact h. No impact	a. Less than significant impact b. Less than significant impact after mitigation c. Less than significant impact after mitigation d. No impact e. No impact f. No impact g. No impact h. No impact	a. Less than significant impact b. Less than significant impact after mitigation c. Less than significant impact after mitigation d. No impact e. No impact f. No impact g. No impact h. No impact
Hydrology and Water Quality (10 issue areas)	a. Less than significant impact b. No impact c. No impact d. No impact e. No impact f. Less than significant impact g. No impact h. No impact i. No impact j. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact g. No impact h. No impact i. No impact j. No impact	a. Less than significant impact b. No impact c. No impact d. No impact e. No impact f. Less than significant impact g. No impact h. No impact i. No impact j. No impact	a. Less than significant impact b. No impact c. No impact d. No impact e. No impact f. Less than significant impact g. No impact h. No impact i. No impact j. No impact
Land Use and Planning (3 issue areas)	a. No impact b. No impact c. No impact	a. No impact b. No impact c. No impact	a. No impact b. No impact c. No impact	a. No impact b. No impact c. No impact
Mineral Resources (2 issue areas)	a. No impact b. No impact	a. No impact b. No impact	a. No impact b. No impact	a. No impact b. No impact
Noise (6 issue areas)	a. Less than significant impact b. No impact c. Less than significant impact d. Less than significant impact e. No impact f. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact	a. Less than significant impact b. No impact c. Less than significant impact d. Less than significant impact e. No impact f. No impact	a. Less than significant impact b. No impact c. Less than significant impact d. Less than significant impact e. No impact f. No impact
Population and Housing (3 issue areas)	a. No impact b. No impact c. No impact	a. No impact b. No impact c. No impact	a. No impact b. No impact c. No impact	a. No impact b. No impact c. No impact
Public Services (5 issue areas)	a(i). No impact a(ii). No impact a(iii). No impact a(iv). No impact a(v). No impact	a(i). No impact a(ii). No impact a(iii). No impact a(iv). No impact a(v). No impact	a(i). No impact a(ii). No impact a(iii). No impact a(iv). No impact a(v). No impact	a(i). No impact a(ii). No impact a(iii). No impact a(iv). No impact a(v). No impact
Recreation (2 issue areas)	a. No impact b. No impact	a. No impact b. No impact	a. No impact b. No impact	a. No impact b. No impact

TABLE 4.3-1

ANALYSIS OF COMPARATIVE LEVEL OF IMPACT OF PROPOSED PROJECT AND ALTERNATIVES

(Better, Similar, or Worse Compared to the Proposed Project)

CEQA Issue Area	Proposed Project Impact Summary	Alternative 1: No Project Alternative	Alternative 2: Full Closure of Los Angeles Street	Alternative 3: Restricted Left Hand Turns from Los Angeles Street (aka Modified Partial Closure)
Transportation and Traffic (7 issue areas)	a. Less than significant impact b. Significant and unavoidable impact c. No impact d. No impact e. No impact f. No impact g. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact g. No impact	a. Less than significant impact b. Significant and unavoidable impact c. Less than significant impact d. No impact e. No impact f. No impact g. No impact	a. Less than significant impact b. Significant and unavoidable impact c. Less than significant impact d. No impact e. No impact f. No impact g. No impact
Utilities and Service Systems (7 issue areas)	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact g. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact g. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact g. No impact	a. No impact b. No impact c. No impact d. No impact e. No impact f. No impact g. No impact

CHAPTER 5.
CEQA CONSIDERATIONS

This section of the Environmental Impact Report (EIR) considers the potential for significant environmental effects that cannot be avoided if the proposed project is implemented, significant irreversible commitment of resources, and growth-inducing impacts, consistent with the provisions of Section 15126(b), (c), and (d) of the State of California Environmental Quality Act Guidelines (State CEQA Guidelines).

5.1 Significant Environmental Effects That Cannot Be Avoided if the Proposed Project Is Implemented

Section 15126.2(b) of the State CEQA Guidelines requires an EIR document to address significant environmental effects that are expected to be unavoidable under the proposed project. Specifically, Section 15126.2(b) states that the EIR should:

> "Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described."

While alternative design, minimization, and mitigation features would be expected to reduce impacts associated with the proposed alternatives, under some situations impacts cannot be reduced to below the level of significance. In accordance with State CEQA Guidelines Sections 15090 and 15093, these potentially significant impacts require an approved Statement of Overriding Considerations before the project can be approved. The Statement of Overriding Considerations will identify the specific reasons for approving the project using the information provided in Chapter 3 of this EIR in conjunction with other publicly available information.

Based on the information provided in this EIR, the potential for significant and unavoidable impacts is limited to the exacerbation of existing congestion, which cannot be reduced to a level of insignificance, even after imposing mitigation measures.

5.1.1 Transportation and Traffic

As discussed in Section 3.17.6, the proposed project would create significant and unavoidable impacts at up to 17 intersections under the Future with Project (2029) scenario:

4. Alameda Street & Alpine Street (AM Peak Hour)
5. North Main Street & Alpine Street (AM Peak Hour)
10. Alameda Street & Alhambra Avenue (AM Peak Hour)
12. North Broadway & Ord Street (AM Peak Hour)
13. North Main Street & Alameda Street (AM Peak Hour)

17. Alameda Street & Cesar E. Chavez Avenue (Both Peak Hours)
19. Alameda Street & North Los Angeles Street (Both Peak Hours)
23. North Los Angeles Street & Arcadia Street (PM Peak Hour)
24. Alameda Street & Arcadia Street (Both Peak Hours)
29. North Los Angles Street & Aliso Street (PM Peak Hour)
30. Alameda Street & Aliso Street (AM Peak Hour)
32. North Broadway & Temple Street (PM Peak Hour)
33. North Spring Street & Temple Street (PM Peak Hour)
34. North Main Street & Temple Street (PM Peak Hour)
35. North Los Angeles Street & Temple Street (PM Peak Hour)
36. Judge John Aiso & Temple Street (PM Peak Hour)
38. Los Angeles Street & Temple Street (PM Peak Hour)

Physical traffic capacity mitigation would be inconsistent with the project goals of providing additional pedestrian and bicycle environment within the study area. Nonphysical mitigation and minimization measures such as signal timing operational enhancements and altering traffic movement would alleviate traffic impacts, but they would not reduce the impact to these intersections below the level of significance. As such, under the existing traffic model, these intersections would be subject to significant and unavoidable cumulative impacts from the alteration of localized traffic circulation at these intersections.

Implementation of the proposed project would further exacerbate the existing and future (2029 scenario) ramp queue for US 101 NB Off-Ramp / Alameda Street. Standard mitigation measures such as widening the ramp or increasing green time to reduce the queue would not be feasible as they are expected to reduce overall transportation network performance in the arterial intersections. Therefore, a significant impact on the US 101 NB Off-Ramp / Alameda Street location is considered significant and unavoidable.

Significant and unavoidable impacts are not anticipated for other transportation and traffic categories when considered with alternative design, minimization, and mitigation features.

5.2 Significant Irreversible Environmental Effects

Section 15126.2(c) of the State CEQA Guidelines requires an EIR document to address any significant irreversible environmental changes that would result from the proposed project should it be implemented. Specifically, Section 15126.2(c) states that:

> "Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or non- use thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with

the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified."

While some components of the proposed project would result in a net long-term gain to resources within the study area, the construction and operation of the proposed project would result in some irreversible and irretrievable adverse impacts. These impacts are summarized by resource below.

5.2.1 Biological Resources

Construction would require the removal of 38 mature, ornamental street trees from the site. These trees, once removed, would constitute an irreversible loss of vegetation from the study area. However, construction would plant 87 new ornamental trees within the study area, resulting in a net gain of 49 trees. These trees shall be planted in accordance with the City of Los Angeles Bureau of Public Works, Urban Forestry Division regulations. As a result, it is not expected that any irreversible loss of habitat for nesting birds would occur.

5.2.2 Cultural Resources

Significant impacts to the historical, archaeological, and/or tribal components of the Los Angeles Union Station, the ca. 1860–1930s Chinatown, a Native American cemetery, and El Pueblo de Los Angeles Historic Monument, could occur from excavation and modification in and around these sites. Additionally, unknown archaeological, paleontological, and tribal resources or artifacts could be uncovered or damaged during excavation of the proposed project. While these impacts were identified in the EIR as potentially significant, the implementation of mitigation measures MM-CULTURAL-1, MM-CULTURAL-2, MM-CULTURAL-3, and MM-CULTURAL-4 is expected to mitigate impacts to all cultural resources below the level of significance.

The implementation of MM-CULTURAL-1 to -4 would aim to identify and avoid areas with the potential for significant cultural (historical, archaeological, paleontological, and tribal) resources and, if necessary, conduct a Phase III data recovery program for resources that can't be avoided. However, the potential to come across unknown cultural resources during excavation would still exist. The discovery, removal, and/or potential damage to these resources would constitute an irreversible impact to cultural resources in the study area. If cultural resources within disturbance and excavation areas are identified before construction activity, the Phase III data recovery program would recover or document these sites in a manner that contributes to the historic and pre-historic record. Unknown resources that are not identified prior to excavation could be damaged or destroyed. However, Metro shall require monitoring by a qualified archaeologist of all ground-disturbing activities within 100 feet of known extant unique archaeological resources, significant historical resources, or tribal cultural resources per proposed mitigation measures. Although impact would be reduced to a level of insignificance through avoidance or data recovery, where cultural resources are required to be salvaged, there would ultimately be an irreversible loss of cultural material.

5.2.3 Energy

The improvement of the Los Angeles Union Station perimeter, the narrowing of traffic lanes along Alameda St. to accommodate bike and pedestrian lanes, the addition of a tourist bus parking zone, and other pedestrian improvements would make the study area more friendly to bicycle and pedestrian traffic. The removal of lanes along Alameda and Arcadia Street would reduce the capacity for motorized vehicles within the study area. In the short term, there would be a temporary increase in energy consumption and waste during construction. In the long term, converting the study area to an environment more supportive of nonmotorized transport and public transit could reduce the fuel consumption within the study area while increasing connectivity to the larger community for bicycle and pedestrian travelers. As such, the proposed project would have the potential to reduce the consumption on nonrenewable fossil fuels within the study area, resulting in a net-positive energy impact.

5.2.4 Geology and Soils

Irreversible impacts could result from excavation of up to 15 feet of native soils and earthen material, which would be permanently removed, mixed, or displaced from the study area. If native soils are excavated and disposed of offsite, this would represent a permanent loss of native soil or earthen material from the study area. If soils are excavated and reused as fill material on-site, this would likely cause the mixing of soil horizons and could result in permanent alterations to the chemical and physical characteristics of the disturbed soils. Although the impact would be reduced to a level of insignificance through proper engineering practices, where soils are excavated to accommodate the forecourt improvements there would be an irreversible loss of soil. As discussed in Section 3.8.3, these activities would not remove soils currently used for, or suitable for use for agricultural purposes. Therefore, the irreversible loss of native soils is considered an insignificant impact.

5.3 Growth-Inducing Impacts

Section 15126.2(d) of the State CEQA Guidelines requires an EIR document to address any growth-inducing impacts that would result from the proposed project should it be implemented. Specifically, Section 15126.2(d) states:

> "Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristic of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment."

The proposed project does not contribute directly or indirectly to substantial growth or employment within the Los Angeles Area. The proposed project would not result in direct impacts associated with population growth because it does not propose construction of any new residential units or businesses. Pedestrian and bicycle upgrades to the Los Angeles Union Station would help to accommodate the transportation demand anticipated from the existing and projected population and employment by improving the walkability index,[1] increasing bicycle parking capacity, and encouraging transit ridership in the study area. While the project would improve pedestrian and bicycle mobility within the study area, it does not propose a major infrastructure system extensions that could serve as a vector for growth and expansion into a new area.[2] Additionally, the proposed project would require minimal construction activity and is not expected to increase local job demand under short- and long-term time horizons. The proposed project will not result in substantial population growth.

[1] Los Angeles Department of City Planning. June 2013. *Health Atlas for the City of Los Angeles*. "Map 53: Walkability Index (2012)." Map available at: http://planning.lacity.org/cwd/framwk/healthwellness/Maps/53.pdf Main document available at: http://healthyplan.la/wordpress/wp-content/uploads/2013/10/Health-Atlas-for-the-City-of-Los-Angeles-July-2013-FINAL-SMALL.pdf

[2] City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide*. Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

CHAPTER 6.
ORGANIZATIONS AND PERSONS CONSULTED

6.1 Public Agencies

Date	Agency	Name	Title	Content of Meeting
Federal				
N/A				
State				
June 30, 2017	Caltrans	Inter-Governmental Review		Project update and freeway off-ramp analysis
Multiple	California High Speed Rail Authority	Multiple		Project coordination
November 3, 2015	Caltrans	Rick Holland; Yunis Ghausi; Linda Tiara		Project overview & traffic study scope
County				
Multiple	Metro	Link US Project Team		Project coordination
January 26, 2017	Metro	Elizabeth Carvajal	Sr. Manager	Scoping Meeting
May 2, 2017	Metro - Union Station Property Management	Kenneth Pratt		Briefing on project design elements relative to Union Station operations
May 2, 2017, August 24, 2016, July 25, 2016	Metro - Bus Operations	Metro Bus Operations staff		Briefing on project design elements relative to existing bus routes, layover assumptions and bus operations
January 6, 2017	Los Angeles Supervisorial District 1	Javier Hernandez		Project Overview
July 25, 2017	Supervisor Solis's Office, SD 1	Javier Hernandez		Project Overview
City				
July 19, 2017	LAFD	Captain David Sifuentes; Robert Duff		Project overview
April 29, 2016	Office of Historic Resources	Ken Bernstein	Manager and Principal City Planner	Coordinate efforts between the Metro, High Speed Rail (HSR), and Link US
June 20, 2017	LADOT	Dan Mitchell	Assistant GM	Discussion of Alameda Street/US 101 Freeway ramp intersections
April 20, 2017	LADOT	Seleta Reynolds; Dan Mitchell; Marcel Porras	GM Assistant GM	Project Overview

Date	Agency	Name	Title	Content of Meeting
April 10, 2017	Office of Historic Resources	Lambert Giessinger		Metro Planning and Metro Sustainability discussed Forecourt and sustainability projects
July 26, 2017	Office of Councilmember Cedillo, CD1	Luis Gonzalez; Gerland Gubatan; Sharon Lowe		Project Overview
January 6, 2017	Los Angeles Council District 14 & Mayor's Office			Project Overview
December 8, 2016 and July 24, 2017	Office of Councilmember Jose Huizar	Nate Hayward		Project Overview
January 20, 2017	Office of Councilmember Gil Cedillo	Sharon Lowe and Gerald Gubatan		Project overview
January 12, 2017 and August 24, 2017	El Pueblo Commission			Briefing on project design elements relative to pedestrian and vehicle circulation
August 24, 2017	El Pueblo Merchants	El Pueblo Merchants		Briefing on project design elements relative to pedestrian and vehicle circulation
December 7, 2016	LADOT Complete Streets Committee	Tomas Carranza; Zaki Mustafa; Karina Macias; Valerie Watson; Sean Skehan; Dan Mitchell		Briefing on project design elements relative to pedestrian and vehicle circulation & traffic study scope
October 21, 2016	LADOT	Tomas Carranza; Wes Pringle		Traffic study scope
April 7, 2016	LADOT & LADCP	Patricia Diefenderfer; Bryan Eck; Tomas Carranza; Karina Macias		Traffic study scope
January 21, 2016	LADOT	Tomas Carranza; Wes Pringle		Traffic study scope

6.2 Private Organizations

Date	Agency	Name	Title	Content of Meeting
April 10, 2017	Los Angeles Conservancy	Adrian Scott Fine	Directory of Advocacy	Metro Planning and Metro Sustainability discussed Forecourt and sustainability projects
April 18, 2017	Architectural Resources Group (ARG)	Christopher Smith		Metro Sustainability discussed Forecourt and sustainability projects

Date	Agency	Name	Title	Content of Meeting
April 29, 2016	Los Angeles Conservancy	Adrian Scott Fine	Directory of Advocacy	Coordinate efforts between the Metro, High Speed Rail and Link US
July 25, 2016	Los Angeles Union Station Historical Society	Susan Macadams; Tom Savio; Alan Weeks		Review the scope of the project and discuss the historical society's concerns
January 24, 2017	Los Angeles Union Station Historical Society	Susan Macadams; Tom Savio; Alan Weeks		Review the scope of the project and discuss the historical society's concerns
May 2, 2017	Morlin - Union Station Property Management	Matthew Johnson		Briefing on project design elements relative to Union Station operations
January 24, 2017	Morlin - Union Station Property Management	Matthew Johnson; Jeff Gunther; Ashley Nazarian		Briefing on project design elements relative to Union Station operations
December 21, 2016	Historic Cultural Neighborhood Council (HCNC) - Urban Design & Land Use Committee (LUC)			Briefing
January 26, 2017	Chinatown Business Improvement District			Project Overview
January 23, 2017 and August 28, 2017	Chinatown Service Center			Project Overview
January 18, 2017 and August 17, 2017	Historic Cultural Neighborhood Council (HCNC) - Urban Design & Land Use Committee (LUC)	Committee Members		Project Overview
January 13, 2017 and September 8, 2017	Arts District Los Angeles Business Improvement District (ADLA BID)			Project Overview
January 11, 2017	Regional Connector Community Leadership Council - 1st and Central Committee			Project Overview
January 9, 2017 and September 11, 2017	Los Angeles River Artists and Business Association (LARABA)			Project Overview
January 24, 2017	Little Tokyo Community Council			Project Overview

CHAPTER 7.
REFERENCES

Adventist Health. Accessed 6 May 2016. White Memorial Medical Center. Available at: https://www.adventisthealth.org/white-memorial/pages/default.aspx

American Legal Publishing Corporation. 2013. *Los Angeles Municipal Code, Chapter I (Planning and Zoning Code), Article 2, Section 12.19.* Available at: https://law.resource.org/pub/us/code/city/ca/LosAngeles/Municipal/chapter01.pdf

American Legal Publishing Corporation. n.d. Los Angeles Municipal Code. *Chapter V, Article 7,* Section 57.512.1. *Response Distance* Available online at: http://www.amlegal.com/codes/client/los-angeles_ca/

American Legal Publishing Corporation. September 2013. City of Los Angeles, California Code Resources. *Planning and Zoning (Chapter 1 of the Municipal Code*. Chapter 1, Article 2, Specific Planning – Zoning Comprehensive Zoning Plan. Available at: http://www.amlegal.com/library/ca/losangeles.shtml

Amtrak. Accessed 20 January 2017. *Amtrak Fact Sheet, Fiscal Year 2016: State of California.* Available at: https://www.amtrak.com/ccurl/609/387/CALIFORNIA16.pdf

Architectural Resources Group, Inc., 2014, Los Angeles Union Station Historic Structures Report.

Bilodeau, W.L., S.W. Bilodeau, E.M. Gath, M. Oborne, and R.J. Proctor. May 2007. Geology of Los Angeles, California, United States of America. *Environmental & Engineering Geoscience*, *XIII* (2).

Birdseye View Publishing Co. (1909) Los Angeles, 1909. [Los Angeles, Cal.: Birdseye View Pub. Co] [Map] Retrieved from the Library of Congress, https://www.loc.gov/item/2005632465

Cade, Tom J., Mark Martell, and Patrick Redig. 1996. "Peregrine Falcons in Urban North America." *Raptors in Human Landscapes: Adaptation to Built and Cultivated Environments* 1.

CalEPA. Accessed 9 February 2015. *Greenhouse Gas-Reduction Investments to Benefit Disadvantaged Communities.* Available at: http://www.calepa.ca.gov/EnvJustice/GHGInvest/

California Air Resources Board. April 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Available at: http://www.arb.ca.gov/ch/handbook.pdf

California Air Resources Board. 20 April 2007. *Proposed Early Action Measures to Mitigate Climate Change in California*.

California Air Resources Board. 6 May 2013. *Clean Car Standards – Pavley, Assembly Bill 1493*. Available at: http://www.arb.ca.gov/cc/ccms/ccms.htm

California Air Resources Board. Accessed 15 October 2015. *Cap and Trade Program.* Available at: http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm

California Air Resources Board. May 2014. *First Update to the Climate Change Scoping Plan.* Available at: http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

California Air Resources Board. 17 May 2016. "Proposed 2016 State Strategy for the State Implementation Plan." Available at: https://www.arb.ca.gov/planning/sip/2016sip/2016statesip.pdf

California Air Resources Board. 17 June 2016. *California Greenhouse Gas Emission Inventory -2016 Edition*. Available at: http://www.arb.ca.gov/cc/inventory/data/data.htm

California Air Resources Board. 17 June 2016. *California Greenhouse Gas Emissions for 2000 to 2014 – Trends of Emissions and Other Indicators*. Available at: https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf

California Air Resources Board. 18 January 2017. *California's Advanced Clean Car Program*. Available at: https://www.arb.ca.gov/msprog/acc/acc.htm

California Air Resources Board. 20 January 2017. *The 2017 Climate Change Scoping Plan Update.* Available at: https://www.arb.ca.gov/cc/scopingplan/2030sp_pp_final.pdf

California Attorney General Office. January 2010. *Addressing Climate Change at the Project Level*. Available at: http://ag.ca.gov/globalwarming/pdf/GW_mitigation_measures.pdf

California Department of Conservation, Abandoned Mine Lands Unit. Accessed 26 April 2016. Website. Available at: http://www.conservation.ca.gov/omr/abandoned_mine_lands

California Department of Conservation, Division of Land Resource Protection. 2016. *Los Angeles County Williamson Act FY 2015/2016.* Available at: ftp:// ftp://ftp.consrv.ca.gov/pub/dlrp/wa/LA_15_16_WA.pdf

California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. 2012. *Important Farmland in California*. Statewide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/statewide/2012/fmmp2012_wallsize.pdf. 2014 Countywide map available at: ftp://ftp.consrv.ca.gov/pub/dlrp/FMMP/pdf/2014/los14.pdf

California Department of Conservation, Division of Land Resources Protection, Farmland Mapping and Monitoring Program. Accessed 26 April 2016. *California Important Farmland Finder.* Available at: http://maps.conservation.ca.gov/ciff/ciff.html

California Department of Conservation, Division of Oil, Gas & Geothermal Resources. Accessed 27 April 2016. Website. Available at: http://www.conservation.ca.gov/dog/Pages/Wellfinder.aspx

California Department of Education, Educational Demographics Unit. Accessed 6 May 2016. Enrollment by Grade for 2013-14: District Enrollment by Grade. Available at: http://data1.cde.ca.gov/dataquest/

California Department of Fish and Game, Biogeographic Data Branch. Accessed January 2017. *Rarefind 5: A Database Application for the Use of the California Department of Fish and Wildlife Natural Diversity Database*. Sacramento, CA.

California Department of Health Services, Office of Noise Control. February 1976. *Guidelines for the Preparation and Content of Noise Elements of the General Plan*. Contact: P.O. Box 942732 Sacramento, CA 94234–7320.

California Department of Parks and Recreation. Accessed 10 February 2017. *Los Angeles State Historic Park*. Available at: http://www.parks.ca.gov/?page_id=22272

California Department of Transportation. 1997 "Transportation Project-Level Carbon Monoxide Protocol." Available at: http://www.dot.ca.gov/hq/env/air/documents/COProtocol_searchable.pdf

California Department of Transportation. October 2008. *Scenic Highway Guidelines.* Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/guidelines/scenic_hwy_guidelines_04-12-2012.pdf

California Department of Transportation. 2014. *2014 Named Freeways, Highways, Structures and Other Appurtenances in California.* Available at: http://www.dot.ca.gov/hq/tsip/hseb/products/Named_Freeways_Final.pdf

California Department of Transportation. Accessed 17 February 2017. *Frequently asked questions.* Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/faq.htm

California Department of Water Resources. Accessed 15 September 2015. *California Water Today, Volume 1 – The Strategic Plan*. Available at: http://www.waterplan.water.ca.gov/docs/cwpu2013/Final/04_Vol1_Ch03_Ca_Water_Today.pdf

California Division of Oil, Gas, and Geothermal Resources. February 2011. Oil Field Map W1-2.

California Divison of Mines and Geology. Accessed 26 April 2016. Classification of Sand and Gravel Resources Area - San Fernando Valley Production-Consumption Region of the Greater Los Angeles Metrolpolitan Area. Available at: ftp://ftp.conservation.ca.gov/pub/dmg/pubs/sr/SR_143/PartII/SR_143_PartII_Text.pdf

California Energy Commission Staff. 2016. 2016 Integrated Energy Policy Report Update. California Energy Commission. Publication Number: CEC-100-2016-003-CMF. p. 4.

California Energy Commission. May 2011. *California's Energy Future – The View to 2050*.

California Fish and Game Commission. Accessed 14 September 2015. *Miscellaneous Policies: Wetlands Resources.* Available at: http://www.fgc.ca.gov/policy/p4misc.aspx#WETLANDS

California Gas and Electric Utilities, 2016 California Gas Report, p. 61.

California Geological Survey. 1970. *Special Report 101: Geology of the Elysian Park-Repetto Hills Area, Los Angeles County*.

California Geological Survey. 25 March 1999. Seismic Hazard Zones, Los Angeles Quadrangle, Los Angeles County, California.

California Geological Survey. 2001. Alquist-Priolo Earthquake Fault Zone (APEFZ) maps, Geographic Information System (GIS) data files.

California Geological Survey. 2010. 2010 Fault Activity Map of California. Available at: http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html.

California Health and Safety Code, Chapter 6.8, §25500 et seq. (1985, as amended). Available at: http://www.aroundthecapitol.com/code/code.html?sec=hsc&codesection=25404-25404.9

California Native Plant Society. 2017. CNPS Electronic Inventory. Available at: www.cnps.org

California Stormwater Quality Association. January 2003. *California Storm Water Best Management Practice Handbooks: Construction*. Menlo Park, CA. Available at: http://www.cabmphandbooks.com/Construction.asp

California Water Boards. Accessed 14 September 2015. Fact Sheet: *Water Quality Control Policy for Siting, Design, Operation and Maintenance of Onsite Wastewater Treatment Systems (OWTS Policy)*. Available at: http://www.waterboards.ca.gov/water_issues/programs/owts/index.shtml

City of Los Angeles. 1997. Crime Prevention Through Environmental Design: Design Out Crime Guidelines.

City of Los Angeles. 2006. *L.A. CEQA Thresholds Guide.* Available at: http://www.environmentla.org/programs/Thresholds/Complete%20Threshold%20Guide%202006.pdf

City of Los Angeles Bureau of Sanitation. November 2000. *Solid Resources Infrastructure Strategy Facilities Plan*.

City of Los Angeles Bureau of Sanitation. August 2001. *AB 939 2000 Report*.

City of Los Angeles Bureau of Sanitation. Accessed December 2013. Website. *About Los Angeles Sewer System*.

City of Los Angeles Bureau of Sanitation, Environmental Monitoring Division. August 2007. *Santa Monica Bay Biennial Assessment Report: 2005-2006*.

City of Los Angeles Bureau of Sanitation, Major Activities. Accessed December 2013. Website. *Wastewater Collection and Treatment*.

City of Los Angeles Bureau of Sanitation and Department of Water and Power. September 2006. *City of Los Angeles Integrated Resources Plan: Implementation Strategy*. Prepared by CH:CDM.

City of Los Angeles Department of City Planning. Effective 18 June 1996. *Alameda District Specific Plan.* A part of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/specplan/pdf/ALAMEDA.PDF

City of Los Angeles Department of City Planning. Adopted 26 November 1996. *Safety Element of the Los Angeles City General Plan, City Plan Case No. 95-0371*.

City of Los Angeles Department of City Planning. Adopted December 1996. *The Citywide General Plan Framework*.

City of Los Angeles Department of City Planning. Adopted December 15, 2000. *Central City North Community Plan*. A part of the General Plan. Available at: http://planning.lacity.org/complan/pdf/ccncptxt.pdf

City of Los Angeles Department of City Planning. 2001. *Conservation Element of the City of Los Angeles General Plan.* Available online at: http://cityplanning.lacity.org/cwd/gnlpln/consvelt.pdf Page II-48.

City of Los Angeles Department of City Planning. July 7, 2009. *General Plan Land Use Map: Central City Community Plan*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

City of Los Angeles Department of City Planning. Adopted 3 December 2013. *Housing Element 2013-2021*. Available at: http://planning.lacity.org/HousingInitiatives/HousingElement/Text/HousingElement_20140321.pdf s.

City of Los Angeles Department of City Planning. February 25, 2014. *General Plan Land Use Map: Central City North Community Plan.* Available at: http://planning.lacity.org/complan/central/PDF/ccnplanmap.pdf

City of Los Angeles Department of City Planning. March 2015. *Plan for a Healthy Los Angeles: A Health and Wellness Element of the General Plan.* Available at: http://planning.lacity.org/cwd/gnlpln/PlanforHealthyLA.pdf

City of Los Angeles Department of City Planning. May 28, 2015. *Mobility Plan 2035: An Element of the General Plan.* Available online at: http://planning.lacity.org/documents/policy/mobilityplnmemo.pdf

City of Los Angeles Department of City Planning. Accessed 2 May 2016. *General Plan Land Use Map: Central City Community Plan, A Part of the General Plan of the City of Los Angeles*. Available at: http://planning.lacity.org/complan/central/PDF/ccyplanmap.pdf

City of Los Angeles Department of City Planning. Accessed 10 February 2017. *Central City Community Plan*. A part of the Land Use Element of the City of Los Angeles General Plan. Available at: http://planning.lacity.org/complan/pdf/CCYCPTXT.PDF

City of Los Angeles Department of City Planning, Office of Historic Resources. Accessed 21 April 2016. *HistoricPlacesLA: Los Angeles Historic Resources Inventory.* Available at: http://www.historicplacesla.org/map

City of Los Angeles Department of City Planning. n.d. *City of Los Angeles Zone Information and Map Access System (ZIMAS*). Available at: http://zimas.lacity.org/

City of Los Angeles Department of City Planning, Raimi & Associates, County of Los Angeles Department of Public Health, et al. June 2013. *Health Atlas for the City of Los Angeles*. Available at: http://cityplanning.lacity.org/Cwd/Framwk/healthwellness/text/HealthAtlas.pdf

City of Los Angeles Department of Public Works, Bureau of Engineering. Accessed 10 February 2017. *Design Competition Exhibit: First and Broadway Park Design Competition*. Available at: http://eng.lacity.org/projects/fab/design_competition_exhibit.htm

City of Los Angeles Department of Recreation & Parks. Accessed 10 February 2017. *Facility Locator: search for facilities within a 5-mile radius of 800 N. Alameda Street, Los Angeles, CA*. Available at: http://raponline.lacity.org/maplocator/index.cfm?lng=-118.23750139999999&lat=34.056116&radius=5&filter=All&address=800%20N%20Alameda%20St%2C%20Los%20Angeles%2C%20CA%2090012

City of Los Angeles Department of Recreation & Parks. Accessed 10 February 2017. Parks. Available at: http://www.laparks.org/parks

City of Los Angeles Department of Recreation and Parks. n.d. Available at: http://www.laparks.org/index.htm

County of Los Angeles Department of Public Works. August 2012. *County of Los Angeles Countywide Integrated Waste Management Plan: 2015 Annual Report*.

County of Los Angeles Department of Public Works. n.d. *Stormwater Pollution Prevention Home*. Available at: http://ladpw.org/PRG/StormWater/Page_03.cfm

County of Los Angeles Department of Regional Planning. 1980. *County of Los Angeles General Plan, Water and Waste Management Element.* Los Angeles, CA.

County of Los Angeles Department of Regional Planning. January 1993. *County of Los Angeles Streamlined General Plan.* Los Angeles, CA.

County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. Los Angeles County 2035 General Plan: Chapter 11: Noise Element. Available online at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch11.pdf

County of Los Angeles Department of Regional Planning. Adopted 6 October 2015. *County of Los Angeles General Plan – Chapter 16: General Plan Implementation Programs.* Program, C/NR-6. Available at: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch16.pdf

Diaz Yourman & Associates. Revised 29 October 2009. Geotechnical Investigation, Union Station, Mail Dock Conversion to Passenger Platform, Los Angeles, California.

Diaz Yourman & Associates. Revised 4 August 2010. *Preliminary Foundation Report, Union/Patsaouras Plaza Busway Station, 07-LA-10PM 17.20, LA Busway Bridge OH, Bridges Nos. 53-2673 &53-New (POC), Los Angeles, California*.

Diaz-Yourman & Associates. 14 March 2013. *Geotechnical Analysis Technical Memorandum, Los Angeles Union Station Master Plan, Los Angeles, California*.

Environmental Data Resources, Inc. 28 January 2016. The EDR Radius Map Report. 800 North Alameda Street, Los Angeles, CA 90012. Inquiry Number 4524501.2s.

Environmental Protection Agency. Accessed 24 May 2017. Available at: https://www.epa.gov/sites/production/files/signpost/cc.html

Federal Bureau of Investigation. Accessed 29 April 2016. Full-time Law Enforcement Employees by City, 2012. Available at: https://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2012/crime-in-the-u.s.-2012/tables/78tabledatadecpdf/table-78-state-cuts/table_78_full_time_law_enforcement_employees_california_by_city_2012.xls

Federal Railroad Administration. 2005. Los Angeles Union Station Run-through Tracks Project: Environmental Impact Statement. Northwestern University.

Federal Transit Administration. May 2006. *Transit Noise and Vibration Impact Assessment*. Washington, DC.

Goldberg et al. 1999. The People of Yaanga?: Archaeological Investigations at CA-LAN-1575/H, The Metropolitan Water District of Southern California Headquarters Facility Project.

Governor's Interagency Working Group on Zero-emission Vehicles, 2013 ZEV Action Plan: A Roadmap toward 1.5 Million Zero-emission Vehicles on California Roadways by 2025, February 2013, p. 4.

Governor's Office of Planning and Research. 2011. *CEQA and Climate Change*. https://www.opr.ca.gov/s_ceqaandclimatechange.php

Grace, Michael L. 5 May 2014. *75th Anniversary of Los Angeles Union Station…* Available at: http://cruiselinehistory.com/75th-anniversary-of-los-angeles-union-station-in-the-1950s-kim-novak-arrived-aboard-the-southern-pacifics-golden-state-alan-ladd-and-virginia-leith-travelled-aboard-the-santa-fes-su/

GreenInfo Network. Accessed 10 February 2017. California Protected Areas Data Portal (CPAD). Available at: http://www.calands.org/

HDR Engineering, Inc., October 26, 2016, Phase I Environmental Site Assessment Link Union Station Project Area.

Humphrey, Brian, Los Angeles Fire Department, Public Service Officer. 9 December 2013. Telephone conversation with André Anderson, Sapphos Environmental, Inc., Senior Environmental Compliance Specialist, Pasadena, CA.

Infographic: What Do Your Country's Emissions Look Like? Accessed 23 June 2015. Available at: http://www.wri.org/blog/2015/06/infographic-what-do-your-countrys-emissions-look

Intergovernmental Panel on Climate Change. 27 September 2013. Human influence on climate clear, IPCC report says. Available at: https://www.ipcc.ch/news_and_events/docs/ar5/press_release_ar5_wgi_en.pdf

Jones & Stokes. 2004. Los Angeles Union Station Run-Through Tracks EIS.

Kleinfelder. December 10, 2014. *Draft Initial Site Assessment, Los Angeles County Metro Southern California Regional Interconnector Project (SCRIP) Segments 1, 3, 4, and 5, Los Angeles, California*. Prepared for HDR Engineering Inc., 3230 El Camino Real, Suite 200, Irvine, CA 92602-1377

Law/Crandal Inc. 31 March 1995. *Report of Geotechnical Evaluation for Environmental Impact Report Alameda District Plan Master Plan Program EIR.*

Los Angeles County Metropolitan Transportation Authority. June 2010. *Water Action Plan*. Prepared by ICF International and Brezcak & Associates Planning. Available at: http://media.metro.net/projects_studies/sustainability/images/Water_Plan2010_0825.pdf

Los Angeles County Metropolitan Transportation Authority. April 2012. *Climate Action and Adaptation Plan*. Prepared by ICF International. Available at:

http://media.metro.net/projects_studies/sustainability/images/quantifying_the_influence_of_transit_on_land_use_patterns.pdf

Los Angeles County Metropolitan Transportation Authority Climate Action and Adaptation Plan. June 2012. http://media.metro.net/projects_studies/sustainability/images/Climate_Action_Plan.pdf , accessed June 16, 2017.

Los Angeles County Metropolitan Transportation Authority. 2014. *Transforming Union Station*. Prepared by USMP Design Team. Available at: http://media.metro.net/projects_studies/sustainability/images/quantifying_the_influence_of_transit_on_land_use_patterns.pdf

Los Angeles County Metropolitan Transportation Authority. Accessed 20 January 2017. *Facts at a Glance: Agency Info.* Available at: https://www.metro.net/news/facts-glance/

Los Angeles County Metropolitan Transportation Authority. Accessed 20 January 2017. *Interactive Estimated Ridership Statistics.* Available at: http://isotp.metro.net/MetroRidership/Index.aspx

Los Angeles County Metropolitan Transportation Authority. Accessed 20 January 2017. *Map – Los Angeles Union Station.* Available at: http://media.metro.net/projects_studies/union_station/images/131039_map_unionsta_brochure_v7_rb.pdf

Los Angeles County Metropolitan Transportation Authority. Accessed 20 January 2017. *Union Station Brochure.* Available at: http://media.metro.net/projects_studies/union_station/images/131039_map_unionsta_brochure_v7_rb.pdf

Los Angeles County Metropolitan Transportation Authority (Metro) and Southern California Association of Governments (SCAG). 2015. *Connect US Action Plan*. Available at: https://media.metro.net/projects_studies/union_station/images/LAUSMP_Action_Plan_Final_100515.pdf

Los Angeles County Metropolitan Transportation Authority, Southern California Association of Governments, California Department of Transportation, and City of Los Angeles. 2015. *Connect US Plan Action Plan (formerly LA Union Station and 1st/Central Linkages Study)*. Prepared by: CITYWORKS DESIGN with 8-80 Cities, Patricia Smith ASLA, AICP, Fehr and Peers, Deborah Murphy Urban Design + Planning, Arellano Associates, KPFF, Lenax Construction Services.

Los Angeles Department of Water and Power. 2015. 2015 Urban Water Management Plan, p. ES-2.

Los Angeles Department of Water and Power. 2016. 2016. Power Integrated Resource Plan, p. ES-2.

Los Angeles Fire Department. Accessed 26 April 2016. Fire Stations. Available at: http://lafd.org/find-a-fire-station

Los Angeles Homeless Services Authority. 2016. *2016 Greater Los Angeles Homeless Count.* Available at: https://www.lahsa.org/homeless-count/service-planning-area

Los Angeles Police Department. Accessed 29 April 2016. Central Community Police Station. Available at: http://lapdonline.org/central_community_police_station/content_basic_view/1681

Los Angeles Police Department. Accessed 6 February 2017. Crime Mapping and COMPSTAT, Central Area Profile. Available online at: http://www.lapdonline.org/crime_mapping_and_compstat

Los Angeles Times Data Desk. Accessed 26 April 2016. Interactive Map: How Fast is LAFD Where You Live? Available at: http://graphics.latimes.com/how-fast-is-lafd/#15/34.0013/-118.4457

Male, Laura, Sapphos Environmental, Inc., Pasadena, CA. 3 July 2015. Communication with Daniel Kitowski, Transportation Manager (GIS), California Department of Transportation.

Male, Laura. 25 April 2016. Communication with Equity Apartments at Mozaic at Union Station Apartments. 888 North Alameda Street, Los Angeles, CA 90012. (844) 609-1676. Website: http://www.equityapartments.com/los-angeles/union-station/mozaic-at-union-station-apartments#/

McLeod, Samuel A., Natural History Museum of Los Angeles County. 2 May 2016. “Vertebrate Paleontology Records Search for paleontological resources for the proposed LA Union Station MP Project, Job Number: 1304-019, in the City of Los Angeles, Los Angeles County, project area.” Letter response Dustin Keeler, Sapphos Environmental, Inc., Pasadena, CA.

Metrolink. Accessed 20 January 2017. *Facts & Numbers: Metrolink in Perspective.* Available at: http://www.metrolinktrains.com/agency/page/title/facts

Metropolitan Water District of Southern California. 2010. *The Regional Urban Water Management Plan, Fig. A 2-2.* Los Angeles, CA.

Miller, John, Blaine Mallory, Jean Bruce Poole, Katherine A. Peters. May 1981. “National Register of Historic Places Inventory – Nomination Form for El Pueblo de Los Angeles State Historic Park District.” On file at SCCIC.

NASA. 13 August 2014. *The Earth’s Radiation Budget*. Available at: http://missionscience.nasa.gov/ems/13_radiationbudget.html

NASA. Accessed 20 January 2016. NASA, NOAA Analyses Reveal Record-Shattering Global Warm Temperatures in 2015. Available at: http://www.nasa.gov/press-release/nasa-noaa-analyses-reveal-record-shattering-global-warm-temperatures-in-2015

National Highway Traffic Safety Administration, Laws and regulations – Corporate Average fuel Economy, https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy , accessed June 15, 2017.

Office of Planning and Research. 20 January 2016. *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*. Available at: https://www.opr.ca.gov/docs/Revised_VMT_CEQA_Guidelines_Proposal_January_20_2016.pdf

Rensselaer Polytechnic Institute, Troy, NY. Revised 2007. *NLPIP Lighting Answers: Light Pollution - What is Glare?* Available at: http://www.lrc.rpi.edu/programs/nlpip/lightinganswers/lightpollution/glare.asp

Sacramento Metropolitan Air Quality Management District. 1 April 2015. *SMAQMD Recommended Guidance for Land Use Emission Reductions*. Available at: http://www.airquality.org/LandUseTransportation/Documents/SMAQMD%20LU%20Measures-Final_v3-2.pdf

South Coast Air Quality Management District. April 1993. CEQA Air Quality Handbook, p. A8-1.

South Coast Air Quality Management District. February 2013. *Final 2012 AQMP*. Available at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan

South Coast Air Quality Management District. 5 June 2015. Risk Assessment Procedures for Rules 1401, 1401.1 and 212. Available at: http://www.aqmd.gov/docs/default-source/planning/risk-assessment/riskassprocjune15.pdf?sfvrsn=2

South Coast Air Quality Management District. 2017. *Final 2016 AQMP (December 2016).* Available at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp

Southern California Association of Governments. May 2015. *Profile of the City of Los Angeles: Local Profiles Report 2015.* Available at: http://www.scag.ca.gov/Documents/LosAngeles.pdf

Southern California Association of Governments. April 2016. *Southern California Association of Governments 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy.* Available at: http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS.pdf

Southern California Association of Governments. Accessed 20 January 2017. *2016-2040 RTP/SCS Final Growth Forecast by Jurisdiction.* Available at: http://www.scag.ca.gov/Documents/2016_2040RTPSCS_FinalGrowthForecastbyJurisdiction.pdf

Steadman, D. W. 1980. A Review of the Osteology and Paleontology of Turkeys (Aves: Meleagridinae). Contributions in Science, Natural History Museum of Los Angeles County, 330:131-207

Sturn A. 1959. A new species of fossil turtle from the Pliocene of Oregon, with notes on other fossil Clemmys from western North America. Bulletin of the Southern California Academy of Sciences, 58(2):65-71

Totton, Gayle, Native American Heritage Commission, Sacramento, CA. 25 April 2016. Letter response to Elizabeth Carvajal, Metro.

U.S. Department of Transportation, Federal Highway Administration. Accessed 17 February 2017. *Environmental Review Toolkit: Section 4(f) Program Overview.* Available at: https://www.environment.fhwa.dot.gov/4f/index.asp

U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operation, Building Equipment and Home Appliances. PB 206717. Washington, DC.

U.S. Environmental Protection Agency. Accessed 14 October 2015. *Summary of the Energy Independence and Security Act*. Available at: http://www2.epa.gov/laws-regulations/summary-energy-independence-and-security-act

U.S. Environmental Protection Agency. April 2016. *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014*. Available at: https://www3.epa.gov/climatechange/Downloads/ghgemissions/US-GHG-Inventory-2016-Main-Text.pdf

U.S. Fish and Wildlife Service. n.d. National Wetlands Inventory Map. Available at: http://www.fws.gov/wetlands/Wetlands-Mapper.html

U.S. Geological Survey. 1900. 15-Minute Series Pasadena, California, Topographic Quadrangle. Reston, VA.

U.S. Geological Survey. 1928. 7.5-Minute Series, Los Angeles, California, Topographic Quadrangle. Reston, VA.

U.S. Geological Survey. 1981. *7.5-Minute Series, Los Angeles, California, Topographic Quadrangle*. Reston, VA

U.S. Geological Survey. Accessed 26 April 2016. Mineral Resources On-line Spatial Database. Available at: http://mrdata.usgs.gov/mineral-resources/active-mines.html

United Nations Conference on Climate Change. Accessed 6 May 2016. Available at: http://www.cop21.gouv.fr/en/a-record-over-160-countries-expected-to-sign-the-paris-agreement-in-new-york-on-22-april-2016/

United States Census Bureau. 2010 Census. *Total Population: 2010 Census Summary File 1. "*Census Tract 2060.20 and Census Tract 2071.02." 2010 SF1 100% Data. Available at:

https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=DEC_10_SF1_P1&prodType=table

URS Corporation. 28 November 2001. Geotechnical Investigation Report, Proposed 3-Story Office Building, Los Angeles, California.

URS Corporation. January 4, 2011. Phase I Environmental Site Assessment and Limited Phase II Testing Selection Portions of the Los Angeles Union Station Property, Los Angeles California. Prepared for TPG Capital, L.P., c/o Paul, Hasitngs, Janofsy & Walker, L.L.P. 875 15th Street, N.W., Washington D.C 20005.

Villaraigosa, Antonio R. May 2008. *Securing L.A.'s Water Supply*. Prepared by the City of Los Angeles Department of Water and Power.

Water and Power Associates. Accessed 17 February 2017. *Early Los Angeles Historical Buildings (1900-1925)*. Available at: http://waterandpower.org/museum/Early_LA_Buildings%20(1900%20-%201925)_Page_2.html